LIFE SCIENCE AREAS OF NATURAL AND SCIENTIFIC INTEREST IN SITE DISTRICT 7-2 WEST OF THE HALDIMAND CLAY PLAIN

A Review and Assessment of Significant Natural Areas in Site District 7-2 West of the Haldimand Clay Plain

September 1984

Ministry of
Natural
Resources
Ontario

OFER 8403

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September 1984

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For convenience, this report may be referred to as OFER # 8403. It is one of a number of Open File Ecological Reports comprised of reconnaissance surveys and inventories of ecological areas in Ontario.

Additional copies of this report are obtainable only from the Ontario Ministry of Natural Resources through the following locations: Central Region, 10760 Yonge Street, Richmond Hill, Ontario L4C 3C9, Telephone (416) 884-9202; Southwestern Region, at the nearest District Office of the Ministry of Natural Resources.

Reference copies of this report are available in the above offices, and the Natural Resources Library, 4th Floor Whitney Block, Room 4540, 99 Wellesley Street West, Toronto, Ontario M7A 1W3. Copies have been sent to university libraries in Southern Ontario.

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PREFACE

In 1977, the Parks and Recreational Areas Program of the Ontario Ministry of Natural Resources, with special funding approved by Management Board of Cabinet, initiated a provincial survey of natural areas in connection with park system planning. A parallel initiative focused on the identification of geological sites representative of Ontario's earth science diversity. The mandate for these surveys stems from the protection objective of the Ontario Provincial Parks Policy (1978), which is "to protect provincially significant elements of the natural and cultural landscapes of Ontario".

The overall objective of the natural areas survey is to identify a series of ecological areas that comprise the spectrum of natural landscapes, environments and biotic communities in Ontario. This objective issues from a Cabinet endorsed guideline of the 1978 parks policy which recognizes the role of provincial parks in protecting "a system of features representative of Ontario's life science history and diversity". With this aim, technical guidelines help to direct the selection, documentation and evaluation of natural areas throughout the site regions and site districts of the province.

Between 1980 and 1982, evaluations of remnant natural areas were undertaken in this site districts within the Central and Southwestern Regions of the Ministry. Through these assessments, the finest natural areas were chosen to complement natural features already represented within a series of Nature Reserves proposed through an earlier review of the provincial parks and park reserves (Lindsay and Hanna, 1980). In addition, natural areas identified through this survey complement the Candidate Nature Reserves already proposed for the Niagara Escarpment Planning Area (Parks Planning Branch, 1976).

The present report was issued as a draft in 1981 under the title "An Identification and Evaluation of Life Science Candidate Nature Reserves in Site District 7-2 West of the Haldimand Clay Plain". Now in the final edition, it is one of a series of such reports which have been completed to date and are available as "Open File Ecological Reports". The findings of these reports have provided the basis for many of the "Recommended Provincial Parks" announced by the Minister in June 1983, and the "Areas of Natural and Scientific Interest" designated in the District Land Use Guidelines also released at that time.

Although evolution of the land use planning process since 1981 has produced new terminology incorporating natural areas, this nomenclature is not used in this report. Rather, natural areas are referred to as either Candidate Nature Reserves or as Significant Sites. This is distinct from the new terminology, as used in the District Land Use Guidelines (OMNR, 1983), which groups natural areas and geological sites as Areas of Natural and Scientific Interest (ANSI s).

According to the District Land Use Guidelines, ANSI s may vary in level of significance. The most significant of these, those referred to as Candidate Nature Reserves in this report, make the greatest contribution to the Ministry's protection objective and are listed in the District Land

Use Guidelines. ANSI s which contribute to a lesser degree to the provincial protection objective are referred to as Significant Sites in this report and are considered to be at least regionally significant. The policy statement for Areas of Natural and Scientific Interest is appended.

Site district evaluations in the Central and Southwestern Regions of the Ministry were carried out by three biologists -- K. M. Lindsay, R. Hanna and R. Klinkenberg. Lindsay coordinated and directed the work, and evaluated Site Districts 6-5, 6-7 and 7-2. Hanna examined Site Districts 6-2, 6-6, 6-8, 6-13, 7-4 and 7-6; Klinkenberg examined Site Districts 7-1 and 6-1. While all three biologists shared common objectives and collaborated in developing evaluation techniques, each undertook field work and evaluation using methods appropriate to their respective site districts.

Each site district report includes an analysis and discussion of the natural features and natural areas of the site district, a discussion of the methodology, recommendations for further work and possible methods of natural areas protection. Check-sheets for Candidate Nature Reserves are appended, as are brief descriptions of other natural areas in the site district.

The information collected during the site district assessments forms the foundation of a provincial natural areas data base. This data base is being updated as new information is obtained. It is an important component of the planning process at district, regional and provincial levels of the Ministry. Readers are invited to add to the data base, either by contributing to studies conducted by the Ministry, or through information contributed to other groups seeking to protect natural areas.

Although site district assessments were designed to identify those natural areas which contribute mainly to the protection objective of the Ministry, this information should prove useful to regional and local governments, conservation authorities and other orgainzations involved with the identification and protection of significant natural areas. Protection of natural areas may be achieved in several ways, including the purchase of sites by outside agencies. Where natural areas designated as ANSI s occur on public lands managed by the Ministry, it will ensure that the land uses and activities which occur provide for the protection of identified values. On private lands, the Ministry will, through cooperation with others, attempt to ensure that landowners are aware of the significant features on their properties and seek the owners' cooperation in protecting such features.

ACKNOWLEDGEMENTS

Many people contributed to the preparation of the site district reports. H. J. Featherston, H. Pronk, J. Griffin and G. Rodgers (Parks and Recreatonal Areas Section, Central Region, Ontario Ministry of Natural Resources) played a major role in the administration of this project, providing continual and much appreciated logistic and technical support. G. Murphy and E. Martelle (Parks and Recreational Areas Section, Southwestern Region) also contributed substantially to this project. Technical direction for the project came from an informal committee composed of the Parks Coordinators of both regions, H. J. Featherston, G. Murphy and E. Martelle; the Regional Park Planners, G. Rodgers, W. McNab and I. Seddon; and T. J. Beechey, (Life Science Coordinator, Parks and Recreational Areas Branch, Queen's Park). Discussions on technical matters with T. J. Beechey, W. McNab and G. Rodgers proved especially valuable.

Throughout the course of this project, P. Terpstra's assistance with background research, data analysis, map preparation, field work and report editing has been invaluable. L. Sajnovic supervised report typing with proficiency and looked after many other details.

A number of individuals kindly supplied information on biologically significant sites within the site district and the status of rare flora and fauna. The author thanks especially V. R. Brownell, G. Cordiner, D. Hussell, R. Klinkenberg, G. Peck, I. D. Macdonald, J. L. Riley, D. C. Smith, R. H. Spurr and R. E. Whiting. Part of this study, the selection of candidate nature reserves in the Norfolk Sand Plain, was initiated in 1976 while the author was on contract with Parks Branch, Ontario Ministry of Natural Resources, Queen's Park. The Long Point Bird Observatory provided accommodation and research space at Backus House during the field evaluation phase of the study in 1976.

The draft Site District 7-2 report was reviewed by selected experts familiar with the geographical area under study in Site District 7-2. Comments made by Dr. P. Catling, T. Crabe, Dr. S. Hilts, R. Klinkenberg, M. Shivas, R. Spurr and R. Whiting are appreciated and have been added to the data base for ANSI's at district and regional offices and the main office of the Ministry. These reviews generally confirmed the selection of ANSI's made by this site district study.

CONTENTS

	Page Number
PREFACE	i
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	v
LIST OF MAPS AND TABLES	vi
SUMMARY	vii
1. INTRODUCTION	1
2. METHODOLOGY	13
3. CANDIDATE NATURE RESERVES	19
4. CONCLUSIONS	25
GLOSSARY	27
APPENDIX A: CANDIDATE NATURE RESERVE CHECK-SHEETS AND ENVIRONMENTAL DATA CARDS FOR SIGNIFICANT SITES IN SITE DISTRICT 7-2, WEST OF THE HALDIMAND CLAY PLAIN	29
APPENDIX B: CANDIDATE NATURE RESERVES PROPOSED BY MACDONALD (1980) FOR THE HALDIMAND CLAY PLAIN	101
APPENDIX C: DOCUMENTED SITES OF BIOLOGICAL SIGNIFICANCE	105
APPENDIX D: POLICY FOR AREAS OF NATURAL AND SCIENTIFIC INTEREST	120
BIBLIOGRAPHY	123
MAP REFERENCES	130

LIST OF MAPS AND TABLES

Page Number

Figure Number

1. Site Regions and Districts of Southern Ontario 2

2. Site District 7-2 Relative to Niagara Escarpment Planning Area 3

3. Location of Provincial Parks with Proposed Nature Reserve Zones Within the Study Area 12

4. Location of Candidate Nature Reserves in Site District 7-2, West of the Haldimand Clay Plain 20

5. Candidate Nature Reserves in the Haldimand Clay Plain 103

Table Number

1. Summary of Natural Features Analysis and Candidate Nature Reserve Selection Procedure by Physiographic Region and Landform for Site District 7-2, West of the Haldimand Clay Plain 6

2. Time Allocation for Natural Features Analysis and Candidate Nature Reserve Selection Procedure For Site District 7-2, West of the Haldimand Clay Plain 14

3. Summary of the Major Features Represented in Candidate Nature Reserves in Site District 7-2, West of the Haldimand Clay Plain 21

Map Number

1. Candidate Nature Reserves and Significant Sites in Site District 7-2

SUMMARY

Site District 7-2 stretches in a broad belt across the southwestern Ontario peninsula, from southern Lake Huron, along the north shore of Lake Erie, eastwards to the Niagara River. Its northern boundary runs from Grand Bend on Lake Huron, southeast to St. Thomas, bends northeast towards Hamilton and follows the Niagara Escarpment across the Niagara peninsula. Flat to undulating lacustrine plains (clay plains, sand plains, bevelled till plains) dominate the landscape. As one part of the lowland region bordering the Great Lakes, the elevations are generally less than 61 m (200 feet) above the levels of Lakes Huron and Erie. The main breaks in topography are created by the rivers draining the district - the Grand, Thames, Ausable and Sydenham Rivers and the series of smaller, independent, river systems along the Lake Erie coast, including Talbot, Kettle, Catfish, Big Otter and Big Creeks. The shoreline environments found along Lakes Huron and Erie - shoreline bluffs, coastal sand dunes and sandspit/marsh systems (at Long Point and Turkey Point) - add to the variety of sites. Deciduous forests with few coniferous trees and an abundance of oaks, hickories, black walnut, tulip-tree, sycamore and many other southern species that grow nowhere else in Canada, characterize the vegetation of this region.

The district is used intensively for agriculture with cash crop farming of soybeans and corn, tobacco growing in Norfolk, and mixed farming in Lambton and Haldimand. Sarnia, St. Thomas, Simcoe and Brantford are a few of the major centres; many of the other centres are agricultural service towns or cottage and resort communities.

An estimated ten per cent of the study area remains in a natural and relatively undisturbed state. The study area consists of Site District 7-2, west of the Haldimand Clay Plain. (The Haldimand Clay Plain occupies the eastern end of the site district, basically the southern extent of the Niagara peninsula.) An analysis of the physiographic regions, landforms, and present natural landscape suggests that the following vegetation-landform features are representative of the study area: upland forests, upland/lowland forest complexes on sand plain and clay plain sites, river valleys with adjoining uplands, shoreline bluffs along Lake Erie, coastal sand dune and wetland systems along Lake Huron, and a major shoreline sandspit and marsh system on Lake Erie. Four provincial parks with nature reserve potential are located in the study area: Pinery, Ipperwash, Long Point and Turkey Point.

In addition to the Nature Reserve zones proposed for these four parks, the following sixteen candidate nature reserves offer the best representation of the major vegetation-landform features of the study area.

NORFOLK SAND PLAIN

Upland Forests on Sand Plain	Springwater Forest (40I/11 980320)
Upland/Lowland Forests on Sand Plain	Backus Woods (40I/9 420230) South Walsingham Sand Ridges (40I/10 360200) Big Otter Creek (40I/15 195405)

River Valleys with adjoining Sand Plain Uplands	Big Otter Creek (40I/15 195405) Big Creek Floodplain (40I/10 380210) Delhi Big Creek Valley (40I/15 400400) Spooky Hollow (40I/9 555305)

ST. CLAIR PLAINS

Upland/Lowland Forests on Clay Plain	Plum Creek Upland Woodlots (40I/16 960365)
River Valleys with adjoining Clay Plain Uplands	Bear Creek Floodplain Tableland Woods (40J/9 900330)

EKFRID CLAY PLAIN

River Valleys with adjoining Clay Plain Uplands	Thames River Floodplain (40I/12 550315) Talbot Creek (40I/11 695200)

BOTHWELL SAND PLAIN

Upland/Lowland Forests on Sand Plain	Skunk's Misery (40I/12 340230)
Shoreline Bluffs	Elgin and Kent County Shoreline (40I/5 440015)

HORSESHOE MORAINES AND HURON SLOPE

River Valleys with adjoining Till Moraine and Sand Plain Uplands	Ausable River (40P/4 345740)

HURON FRINGE

Coastal Sand Dune, Ridge, Swale and Wetland Systems	Port Franks Wetlands and Forested Dunes (40P/4 265855)

ERIE SPITS

Major Great Lakes Sandspit and Marsh System	Long Point and Turkey Point (40I/9 600110)

1. INTRODUCTION

Site District 7-2 spans extreme southern Ontario from Sarnia on Lake Huron to the Niagara River on the east. It takes in an area along the north shore of Lake Erie, commencing east of Rondeau, and lying south of a line running from Grand Bend south to St. Thomas and bending north again towards Hamilton (Figure 1). Parts of Lambton, Kent, Huron, Middlesex, Elgin, Oxford and Brant Counties and the Regional Municipalities of Haldimand-Norfolk, Hamilton-Wentworth, and Niagara fall within the site district.

The Niagara Escarpment runs along the northeastern boundary of the site district, across the Niagara peninsula. The boundary of the Niagara Escarpment Planning Area overlaps parts of the northeastern boundary (Figure 2). Only that portion of Site District 7-2 lying west of the Niagara Escarpment Planning Area was included in this study. An identification and evaluation of the candidate nature reserves within the Niagara Escarpment Planning Area was already available (Park Planning Branch, 1976). As well, the Haldimand Clay Plain portion of the site district was excluded from this study because Macdonald (1980) identified a series of candidate nature reserves within this physiographic region. Appendix B contains a summary of the candidate nature reserves proposed by Macdonald. Thus, the study area is defined as Site District 7-2, west of the Haldimand Clay Plain.

Most of Site District 7-2 is a relatively smooth, low lying plain, dissected only by river and creek systems. Elevations range from 260 m (850 feet) to about 177 and 175 m (580 and 573 feet) above sea level, the elevations of Lake Huron and Lake Erie respectively, as the plain slopes from inland Ontario down towards Lakes Huron and Erie. Four major rivers drain the site district. In the southwest and central parts, the Sydenham and Thames River flow into Lake St. Clair, while the Ausable River feeds north into Lake Huron at Port Franks. The Grand River drains the eastern part of the site district, emptying into Lake Erie. A number of smaller rivers found along the north shore of Lake Erie drain directly into the lake; among them are Talbot, Kettle, Catfish, Big Otter and Big Creeks. Because of its southern location (between 42°37', and 43°20' latitude) and the ameliorating effect of the Great Lakes, the climate of this region is one of the most favourable in Ontario. The average length of the growing season is between 203 and 210 days (Putnam and Chapman, 1938).

The extreme southern part of Ontario has long been noted for its unusual flora with many elements of a southern character which are not found elsewhere in Canada. In 1894, Macoun wrote,

> "That part of the southwestern peninsula of Ontario which lies west of Toronto has a forest quite distinct in many respects from any other part of Canada.
>
> One leading feature is the almost total absence of coniferous trees and the great development of the hickories, the oaks, the buttonwood, the chestnut and the tulip tree. The shrubs and herbaceous plants change with the forests and scores of other species not found in other parts of Canada grow here in profusion."

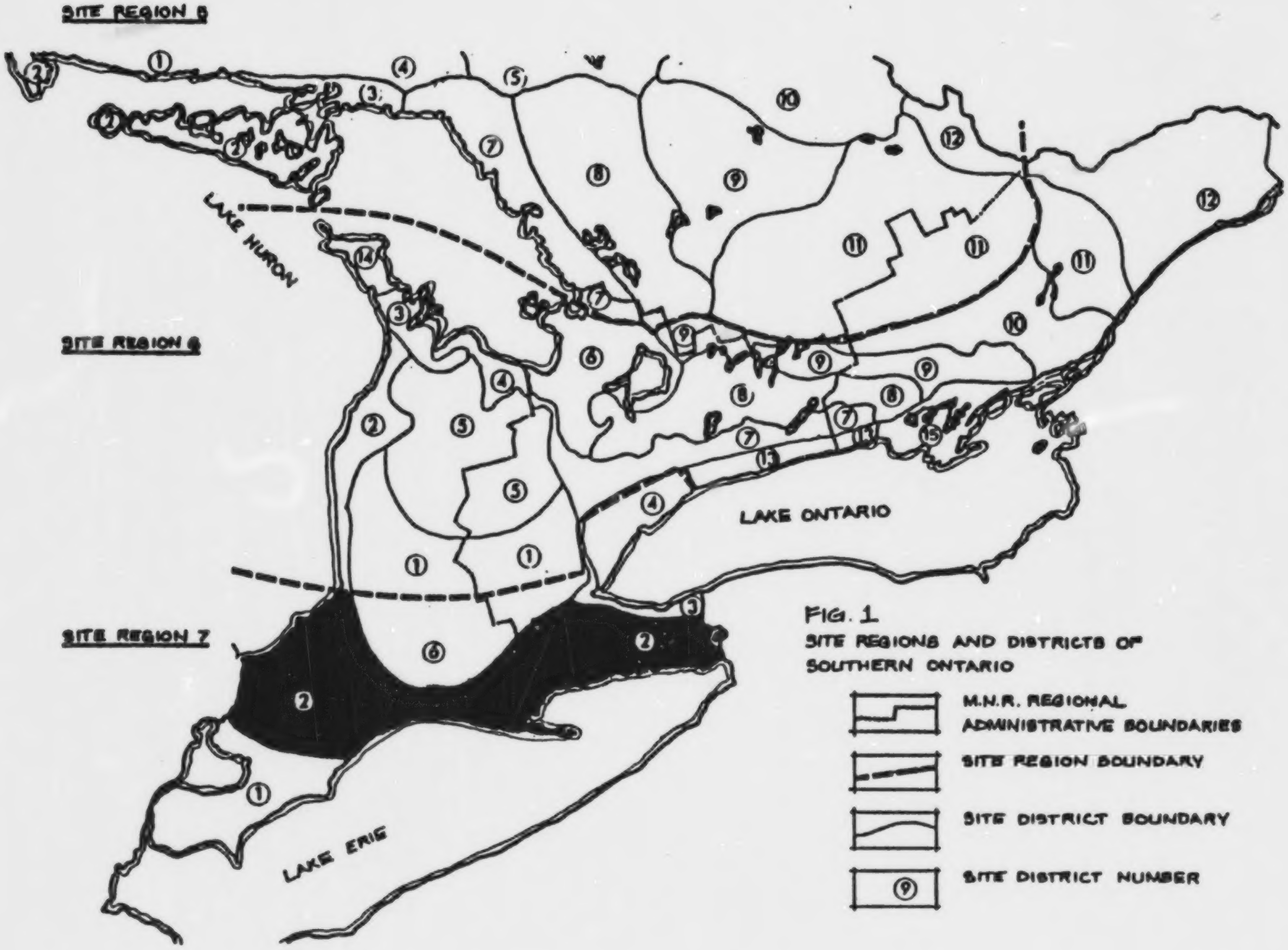
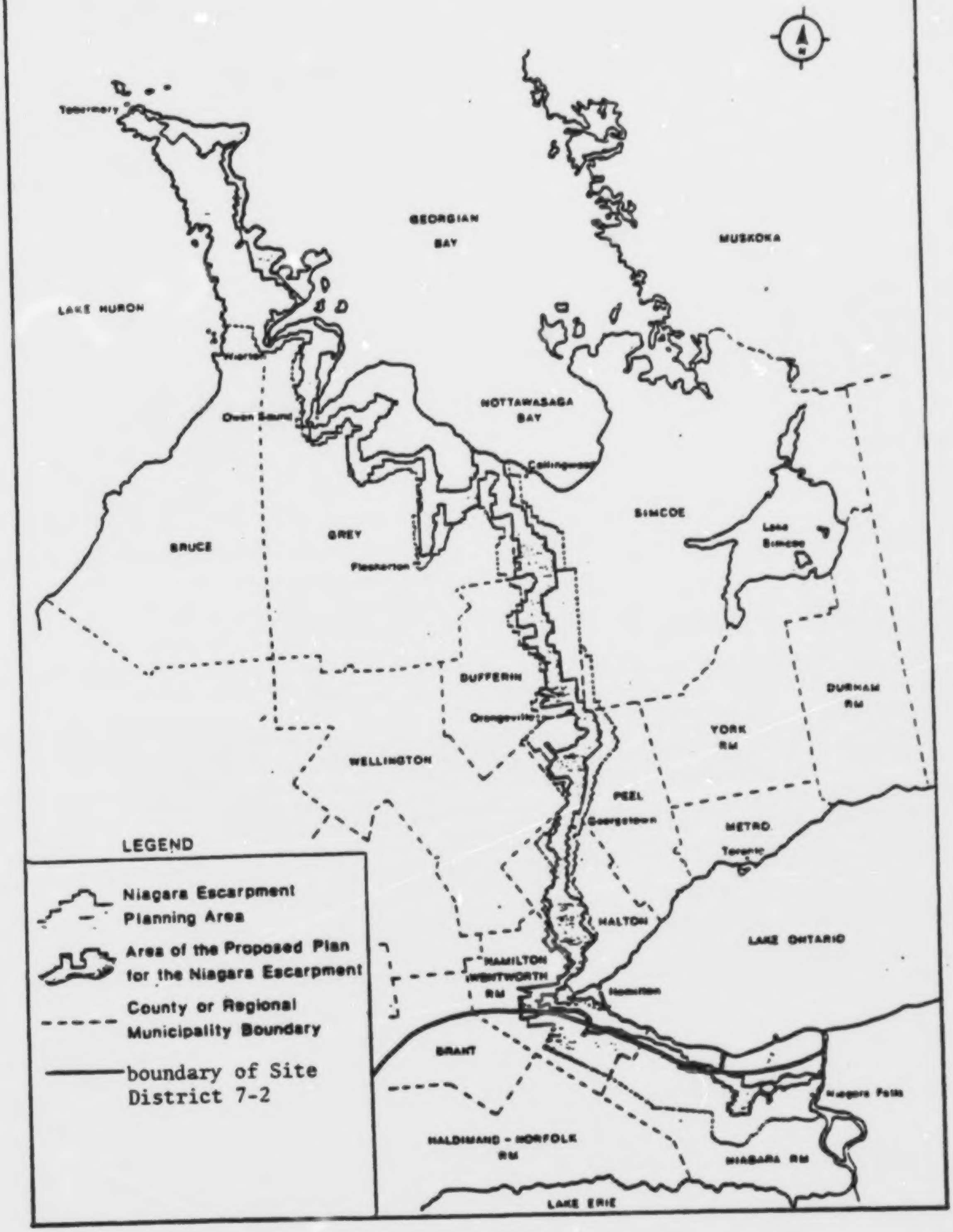

SITE REGION 5
SITE REGION 6
SITE REGION 7
LAKE HURON
LAKE ONTARIO
LAKE ERIE
M.N.R. REGIONAL ADMINISTRATIVE BOUNDARIES
SITE REGION BOUNDARY
SITE DISTRICT BOUNDARY
SITE DISTRICT NUMBER

FIG. 1
SITE REGIONS AND DISTRICTS OF SOUTHERN ONTARIO

Figure 2. Site District 7-2 Relative to the Niagara Escarpment Planning Area


Tobermory
GEORGIAN BAY
MUSKOKA
LAKE HURON
Wiarton
Owen Sound
NOTTAWASAGA BAY
Collingwood
SIMCOE
Lake Simcoe
BRUCE
GREY
Flesherton
DUFFERIN
Orangeville
DURHAM RM
YORK RM
WELLINGTON
PEEL
Georgetown
METRO
Toronto
HALTON
LAKE ONTARIO
HAMILTON WENTWORTH RM
Hamilton
BRANT
Niagara Falls
HALDIMAND - NORFOLK RM
NIAGARA RM
LAKE ERIE
LEGEND
Niagara Escarpment Planning Area
Area of the Proposed Plan for the Niagara Escarpment
County or Regional Municipality Boundary
boundary of Site District 7-2

Macoun and Malte (1917) described the vegetation as follows,

> "The most characteristic trees are the Hickories (six species), the Oaks (ten species), The Black Walnut (*Juglans nigra*). the Chestnut (*Castanea dentata*) and the Sycamore (*Platanus occidentalis*). Less abundant and more local in their distribution are: Cucumber tree (*Magnolia acuminata*), Tulip tree (*Liriodendron tulipifera*), Flowering dogwood (*Cornus florida*), which have all beautiful and very conspicuous flowers, Papaw (*Asimina triloba*), Red mulberry (*Morus rubra*), American crab apple (*Pyrus coronaria*), Sour gum (*Nyssa sylvatica*), Sassafras (*Sassafras variifolium*), and others".

This region of southern deciduous forest along the north shore of Lake Erie, lying south of a line drawn from Grand Bend to Toronto has been named the Carolinian Zone in the Canadian Flora (Macoun and Malte, 1917) and the Deciduous Forest Zone (Halliday, 1937). Hills (1959) treats the region as lying within his Lakes Erie - Ontario site region, Site Region 7.

Site District 7-2 is one of five site districts in Site Region 7. A site region is defined as an area of land within which the response of vegetation to the features of landform follows a consistent pattern (Hills, 1959). Site Region 7 is characterized as a very smooth to undulating landscape composed of lacustrine and bevelled till plains. Normal mesic, normal dry and normal wet sites (as defined by Hills, 1959) are typically forested with sugar maple-beech-oak, oak-hickory and oak-ash respectively. Each site region is subdivided into site districts based on landforms which set apart fairly large areas. Hills (1959) described the St. Thomas Site District (7-2) as "a smooth plain of moderate lime clay overlain in many places by thin to moderately deep deposits of low-base and somewhat agrillaceous sand".

Eleven of the minor physiographic regions outlined by Chapman and Putnam (1973) lie wholly or partially within the boundaries of Site District 7-2: the Haldimand Clay Plain, Norfolk Sand Plain, St. Clair Sand Plains, Ekfrid Sand Plain, Bothwell Sand Plain, Horseshoe Moraines, Huron Slope, Huron Fringe, Erie Spits, Caradoc Sand Plains and Mount Elgin Ridges. The dominant landforms of the site district are clay plains, sand plains and bevelled till plains.

Together, the Haldimand Clay Plain at the eastern end of the district, the St. Clair Clay Plain (a large part of Lambton County in which a thin layer of lacustrine clay mantles a gently undulating till plain), and the Ekfrid Clay Plain southwest of London comprise 47 per cent of the total area. The Norfolk Sand Plain which extends south and southwest of Brantford to Lake Erie, the Bothwell Sand Plain, along the Thames River between London and Chatham and, the Caradoc Sand Plain, southwest of London, cover another 35 per cent.

A number of very low, till moraines cross the site district, portions of the Wyoming, Seaford, Blenheim, St. Thomas, Tillsonburg, Paris and Galt moraines. Most of these moraines fall within the Horseshoe Moraines and Mount Elgin Ridges physiographic regions, making up about 90 per cent of the total environments within the site district. The Huron Fringe and Erie Spits physiographic regions encompass about half of the Great Lakes shorelines within the site district.

Table 1 presents an analysis of the landscape of Site District 7-2 west of the Haldimand Clay Plain and its remaining natural features. The ten physiographic regions that fall within the study area are listed in order of importance. For each physiographic region, component landforms are given based on Chapman and Putnam, 1972 and 1973. As well, the percentage and types of natural areas remaining is estimated, based on a review of the 1:50,000 topographic maps covering the site district.

For Site District 7-2 overall, an estimated 10% of the landscape remains in a natural condition, that is in forest or wetland. Many of the larger natural areas left are associated with river valleys, wetter lowland sites, undulating sites or dry sand dunes; sites that are unsuitable for agriculture. The most common natural features left are: upland forests, upland/lowland forest complexes on sand plain sites and on clay plain sites, river valleys with adjoining uplands, high shoreline bluffs along Lake Erie, coastal sand dune/ridge/swale and wetland systems along Lake Huron, and a major Great Lakes shoreline sandspit and marsh system on Lake Erie.

There are four provincial parks with nature reserve potential in the study area - Pinery, Ipperwash, Long Point and Turkey Point (Lindsay and Hanna, 1980). All four offer some representation of shoreline environments: coastal sand dunes along Lake Huron at Pinery and Ipperwash and a Lake Erie sandspit, marsh and wetland system at Long Point and Turkey Point. At Pinery, eight Nature Reserve zones have been proposed to include forested and unforested dunes, river floodplain and important interdunal wet meadows and open dune savanna sites. The Nature Reserve zones suggested at Ipperwash, Long Point and Turkey Point are small, about 4 ha (10 acres), 110 ha (275 acres) and 60 ha (150 acres) respectively. Additional representation of these shoreline environments was sought by this study. Figure 3 shows the extent of the study area and the location of provincial parks with proposed Nature Reserve zones within it.

TABLE 1. SUMMARY OF NATURAL FEATURES ANALYSIS AND CANDIDATE NATURE RESERVE SELECTION PROCEDURE BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 7-2 WEST OF THE HALDIMAND CLAY PLAIN

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions wholly or partly within Site District	Proportion of Site District covered by Physiographic Region	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these Landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx.Area		
Norfolk Sand Plain (a small part extends into 7-6)	25	sand plain	95	-about 15 to 25% left in forest and wetland, greatest amount in the south -the remaining natural areas range from abou 25 to 500 ha in size -the larger areas are associated with: -river valleys;sites along the 4 major streams dissecting the sand plain - Kettle, Catfish, Otter and Big Creeks -wetter, lowlying parts of the sand plain (interdunal and intermorainal areas) -very dry sand plain sites -shorebluffs and beaches along Lake Erie shoreline	-	-	-	-upland forests -upland/lowland forests -river valley with adjoining uplands -dry, open, oak plains -shoreline environments	-Springwater Forest (40I/11 980320) -Backus Woods (40I/9 420230) -South Walsingham Sand Ridges (40I/10 360200) -Big Otter Creek (40I/15 195405) -Big Creek Floodplain (40I/10 380210) -Delhi Big Creek Valley (40I/15 400400) -Spooky Hollow (40I/9 555305)
		clay plain	5	-a few woodlots and stream valleys remai -also an area along Big Otter Creek	-	-	-	-	-

TABLE 1. SUMMARY OF NATURAL FEATURES ANALYSIS AND CANDIDATE NATURE RESERVE SELECTION PROCEDURE
BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 7-2
WEST OF THE HALDIMAND CLAY PLAIN

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions wholly or partly within Site District	Proportion of Site District covered by Physiographic Region	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these Landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx. Area		
St. Clair Clay Plains (also in 7-1)	13	bevelled till plain	95	-about 10% left in natural condition -the woodlots at the back of farms are frequently linked, forming larger natural areas from 50 to 300 ha in size -natural areas also remain along creek valleys (Bear Creek, Black Creek)	-	-	-	-upland/lowland forests -valleys with adjoining uplands	-Plum Creek Upland Woodlots (40J/16 960365) -Bear Creek Floodplain and Tableland Woods (40J/9 900330)
		till moraine	4	-1%; a very few small woodlots and wetlands	-	-	-	-	-
		clay plain	1	-10% -forests and shrublands along Clear Creek	-	-	-	-	-
Ekfrid Clay Plain	9	clay plain (the Thames River floodplains are mapped as sand plain)	100	-mostly cleared; about 5% or less forested -a few scattered small woodlots from 30 to 80 ha in size -also forested corridors along the major rivers, their tributaries and smaller	-	-	-	-river valley -clay plain woodlots	-Thames River Floodplain (40I/12 550315) -Talbot Creek (40I/11 695200)

TABLE 1. SUMMARY OF NATURAL FEATURES ANALYSIS AND CANDIDATE NATURE RESERVE SELECTION PROCEDURE BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 7-2 WEST OF THE HALDIMAND CLAY PLAIN

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions Wholly or partly within Site District	Proportion of Site District covered by Physiographic Region	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these Landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx. Area		
Ekfrid Clay Plain cont'd				streams (Thames and Sydenham Rivers, Talbot Creek) -small sections of forested shorebluffs				-shoreline environments	
Bothwell Sand Plain (also in 7-1)	7	sand plain	100	-5 to 25% -large forests found mainly on poorly drained, flat to undulating, sand plain sites (woodlands vary from 50 to 1000 ha in size) -forested shorebluffs stand along Lake Erie shoreline -small natural areas persist along streams and creeks (Sydenham, Clear Creek) -small prairie sites	-	-	-	-upland/lowland forests -shoreline environments -river valleys with adjoining uplands -remnant prairies	-Skunks Misery (40I/12 340230) -Elgin and Kent County Shoreline (40I/5 440015)
Horseshoe Moraines (also in 7-6, 6-1 and 6-5)	6	till moraine till plain clay plain muck	60 20 10 5	-about 10% persists in forest and wetland in region as whole including: -extensive natural areas along the Ausable River	-	-	-	-river valleys with adjoining uplands -lowland forests	-Ausable River (40P/4 345740) *Partly in Huron Slope physiographic region

TABLE 1. SUMMARY OF NATURAL FEATURES ANALYSIS AND CANDIDATE NATURE RESERVE SELECTION PROCEDURE BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 7-2 WEST OF THE HALDIMAND CLAY PLAIN

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions wholly or partly within Site District	Proportion of Site District covered by Physiographic Region	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these Landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx.Area		
Horseshoe Moraines cont'd		bevelled till plain sand plain	3 2	-large swamps (to 800 ha in extent) south of Brantford -woodlots at the back of farms and along streams (30 to 100 ha in size)					
Huron Slope (also in 6-2)	3	bevelled till plain sand plain clay plain and muck	45 30 20	-about 10% -large natural areas along the Ausable River and Parkhill Creek (100 to 500 ha in extent) -one large lowland forest survives on the clay and muck plain once occupied by Thedford Marsh -scattered smaller woodlots (to 150 ha in size), often at the back of farm lots	-	-	-	-river valleys with adjoining uplands -lowland forests	-Ausable River (40P/4 345740) *Partly in the Horseshoe Moraines physiographic region

TABLE 1. SUMMARY OF NATURAL FEATURES ANALYSIS AND CANDIDATE NATURE RESERVE SELECTION PROCEDURE BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 7-2 WEST OF THE HALDIMAND CLAY PLAIN

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions Wholly or partly within Site District	Proportion of Site District covered by Physiographic Region	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these Landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx. Area		
Huron Fringe (also in 6-2 and 6-3)	3	sand plain with sand dunes and sand ridges	85	-about 50 to 60% -consists of forested dune ridges, often separated by wet swales -much of the shoreline built up with cottages -more of the backshore dune ridge and swale systems undeveloped -one small shoreline marsh south of the Kettle Point Indian Reserve	Pinery Provincial Park	-coastal dune system of forested and unforested dunes, with river floodplain and important wet meadow and open dune savanna sites as well	1200 ha (3000 acres)	-sand dune/ridge, wet swale systems and wetlands	-Port Franks Wetlands and Forested Dunes (40P/4 265855)
		clay plain and muck	15	-2% -small sections of shorebluff undeveloped -most of shoreline built up with cottages	Ipperwash Provincial Park	-small wooded dune and interdunal, calcareous, wet meadow complex	4 ha (10 acres)		
Erie Spits (also in 7-1)	3	sand dunes and ridges, wetlands and open water	1000	-70 to 80% left in natural condition; the rest is built up with cottages	Long Point Provincial Park	-wetlands (wet meadow, shrub thickets and marsh), north of main park road	110 ha (275 acres)	-a major Great Lakes sandspit and marsh (wetlands system)	-Long Point and Turkey Point (40I/9 600110)

TABLE 1: SUMMARY OF NATURAL FEATURES ANALYSIS AND CANDIDATE NATURE RESERVE SELECTION PROCEDURE
BY PHYSIOGRAPHIC REGION AND LANDFORM FOR SITE DISTRICT 7-2
WEST OF THE HALDIMAND CLAY PLAIN

ANALYSIS OF NATURAL FEATURES OF SITE DISTRICT					FEATURES REPRESENTED BY CANDIDATE NATURE RESERVES IN PROVINCIAL PARKS/RESERVES			FEATURES MISSING FROM PROVINCIAL PARKS AND PARK RESERVES	CANDIDATE NATURE RESERVES SELECTED TO REPRESENT THE MISSING FEATURES
Physiographic Regions Wholly or partly within Site District	Proportion of Site District covered by Physiographic Region	Landforms found within Physiographic Region	Proportion of Physiographic Region occupied by each Landform	Types of Natural Features remaining on these Landforms and proportion remaining in a Natural Condition	Park Name	Feature(s)	Approx.Area		
Erie Spits cont'd					Turkey Point Provincial Park	-wetlands (coniferous swamp, deciduous swamp, thickets and cattail marsh) flanked by a steep, forested, shore-bluff	60 ha (150 acres)		
Caradoc Sand Plains (also in 7-6)	3	sand plain	100	-3% -mostly cleared -a few scattered woodlots (20 to 100 ha in size)	-	-	-	-	-
Mount Elgin Ridges (also in 7-6)	3	till moraine clay plain	60 40	-3% -a few scattered woodlots (20 to 100 ha in size) -several sites along Kettle Creek and its tributaries	-	-	-	-	-

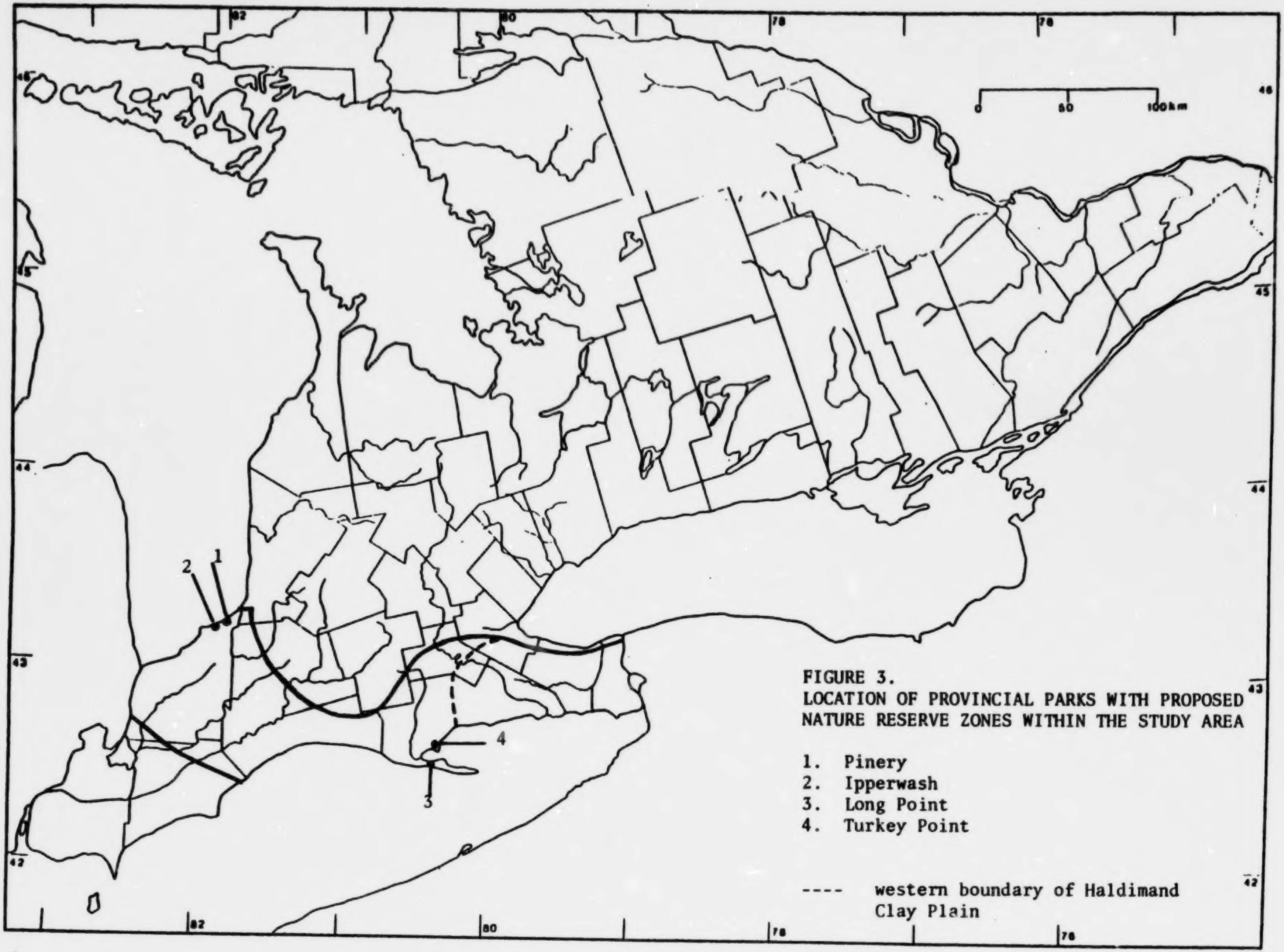

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FIGURE 3.
LOCATION OF PROVINCIAL PARKS WITH PROPOSED NATURE RESERVE ZONES WITHIN THE STUDY AREA

1. Pinery
2. Ipperwash
3. Long Point
4. Turkey Point

---- western boundary of Haldimand Clay Plain

2. METHODOLOGY

This section outlines the four steps taken during an analysis of natural features found within Site District 7-2, west of the Haldimand Clay Plain, and in the identification and evaluation of candidate nature reserves.

(i) Natural Features Analysis

The Protection Objective of Ontario's Provincial Parks Policy (1976) is "to protect provincially significant elements of the natural and cultural landscape of Ontario". Life science resources are the living part of the natural landscape, for example, forests, marshes, plants, animals and their supporting environments. A preliminary life science assessment of provincial parks and park reserves in Central and Southwestern Regions, which identified significant life science features and proposed nature reserves, was completed in 1980 (Lindsay and Hanna, 1980). This life science evaluation of Site District 7-2 is one part of a study of all site districts in southern Ontario, initiated in April, 1980. The goal of both of these assessments is to identify areas that best illustrate the natural features and landscapes of Ontario for inclusion in the Parks System as nature reserves or nature reserve zones in parks, and protection through other means such as Conservation Authorities and Municipal Official Plans.

Following the assessment of life science features represented in the Provincial Parks System, it was necessary to determine that natural features and landscapes that were not included in the Parks System. Site districts, as defined by Hills (1959), served as an ecological framework for the analysis of the diversity of natural landscapes found in southern Ontario. Initially, an overview of the natural features characteristic of each site district was undertaken. This overview of Site District 7-2, west of the Haldimand Clay Plain is summarized on Table 1.

The minor physiographic regions of Chapman and Putnam (1973) were used to segregate the site district into distinctive landform complexes. The proportion of the site district covered by each physiographic region was estimated. For each physiographic region, physiography maps (Chapman and Putnam, 1972; 1:253,440) were used to tabulate landforms and derive their importance in terms of relative area covered. After scanning 1:50,000 topographic maps, the prominent natural features associated with various landform types were recorded, along with an estimate of the percentage of natural area remaining in a relatively undisturbed condition. The features represented within proposed nature reserves in provincial parks and park reserves located within the study area were also summarized on the chart. The final statement about features typical of the site district, but missing from the provincial parks system, was the end result of the natural features analysis.

The remainder of the study focussed on selecting and documenting the best examples of the dominant vegetation-landform features of the site district; in other words, choosing candidate nature reserves to represent the missing features identified through the natural features analysis. Section (ii) to (iv) of the Methodology describe the steps followed. Table 2 tabulates the time spent on each step.

TABLE 2. TIME ALLOCATION FOR NATURAL FEATURES ANALYSIS AND CANDIDATE NATURE RESERVE SELECTION PROCEDURE FOR SITE DISTRICT 7-2, WEST OF THE HALDIMAND CLAY PLAIN

	STEP	DAYS
1.	Natural Feature Analysis (overview of natural landscape of Site District 7-2,west of the Haldimand Clay Plain and identification of life science features missing from provincial parks system).	7
2.	Review of Background Information (review of topographic maps, physiography maps, background information on documented sites of biological significance, airphotos; and selection of sites for field checking).	12
3.	Field Reconnaissance (by automobile and foot)	8
4.	Site Evaluation (final review of airphotos, maps and field notes, preparation of Environmental Data Cards and mapping of significant sites, selection of candidate nature reserves after evaluation and comparison of significant sites).	12

* Note that time spent on check-sheet and report write-up is not included.

(ii) Review of Background Information

Background information on sites of biological significance had already been compiled and mapped on a set of 1:50,000 N.T.S. maps on file at the Parks and Recreation Section, Ministry of Natural Resources, Central Region, Richmond Hill. The background information available for the site district was summarized according to 1:50,000 N.T.S. map sheets and physiographic regions, by B. Mackay and P. Terpstra. These summaries are presented in Appendix C. The major sources of information for this site district were Environmentally Sensitive Areas Reports (ESA), International Biological Program Check-sheets (IBP), published literature (see Bibliography), and an unpublished study of natural areas on the Norfolk Sand Plain (Lindsay, 1976, RLSS).

Topographic and physiographic maps were reviewed in conjunction with the information on documented sites of biological significance to select sites with representative life science features and nature reserve potential. For portions of the study area with little or no background information, sites were chosen strictly from maps. The 1972 airphotos for these sites were examined and after additional selection , a list of sites for field checking was prepared.

The following five criteria formed the basis of all phases of site selection and evaluation. Within each physiographic region and the site district as a whole, sites illustrating similar features were compared in terms of representation, diversity, condition, ecological considerations and special features.

(a) Representation - Representation of the remaining natural features of the site district was of primary importance. The dominant vegetation-landform features of the site district were given special emphasis.

(b) Diversity - Diversity was appraised in terms of the number and range of vegetation-landform features or habitats found within a site. The representation value of a site usually increases in proportion to the diversity of habitats contained within the site.

(c) Condition - The degree of past disturbance to the main feature(s) of the site was assessed. Logging, grazing, fire, drainage, flooding, mining, housing developments, transportation and utility corridors, and recreation were some of the impacts that were considered. Because all of southern Ontario has been effected by human disturbance to varying degrees, none of the sites selected are pristine.

(d) Ecological Considerations - Ecological considerations such as size, shape, buffering from adjacent land use, and watershed location were also weighed. Generally, larger sites, which would be more likely to maintain stable and diverse natural communities, were chosen over smaller sites. However, for certain life science features only small remnant sites are left, especially in the extreme southern part of Ontario (Site Region 7). In such cases, sites that were close together or linked were ranked higher than widely spaced, small areas. Recent work on island biogeography (Diamond, 1975) suggests that species extinctions are less likely to occur in larger sites, linked sites or closely spaced sites than small, isolated sites. Headwater areas and watershed units where some degree of control over inputs would be possible were given special attention.

(e) Special Features - Allowance was also made for special features such as the presence of rare and endangered species, species of phytogeographical interest (significant species), nesting sites for colonial birds such as heronries, and concentrations of breeding and/or migratory waterfowl. The special features criterion was of secondary importance; it was applied only after representation, diversity, condition and ecological considerations had been assessed. Because detailed and complete biological data was lacking for most sites, caution was exercised in comparing the special features of sites with different levels of background data.

(iii) Field Reconnaissance

Four days were spent field checking sites in the western part of the study area, September 30, October 1, 2 and 3. For this portion of the fieldwork, the study team consisted of the author and field assistant, P. Terpstra. The area was travelled by automobile and to a lesser extent by foot. Thirty sites in the St. Clair Clay Plains, Ekfrid Clay Plain, Bothwell Sand Plain, Horseshoe Moraines, Huron Slope and Huron Fringe physiographic regions were visited during these four days of fieldwork. About one hour was spent at each site, usually travelling a preselected route that traversed some of the main feature(s), and as many different habitats as possible. However, sometimes time limitations allowed only for a general inspection from vantage points close to concession roads. Brief notes on the general landscape, soils, site drainage, vegetation types, flora and fauna, condition and adjacent land use were made.

The selection and documentation of candidate nature reserves in the Norfolk Sand Plain physiographic region was based largely on fieldwork carried out during August to October, 1976, while the author was on contract with Parks Branch, Ontario Ministry of Natural Resources, Queen's Park; and supplemental field visits to various sites between 1977 and 1981. In addition, the 1978 airphotos were examined to check current (as of 1978) condition.

(iv) Site Evaluation

Following field reconnaissance, each site was reviewed, evaluated and compared with other similar sites within its landform-vegetation type. For most sites, the 1978 airphotos on file at the Ministry Airphoto Library, Queen's Park, Toronto were consulted to check for land-use changes not evident on the 1972 airphotos. A few poor quality or unrepresentative sites were deleted. The remainder were denoted significant sites (see Glossary). Environmental Data Cards were prepared for each significant site, outlining its location, vegetation-landform feature(s), general physical and biological characteristics, watershed, size and disturbances. Boundaries were mapped on topographic maps (1:50,000 scale).

Following further evaluation within vegetation-landform types, candidate nature reserves (see Glossary) were selected from the list of significant sites. Representation, diversity, condition and ecological considerations were weighed equally in the evaluation process, while special features were of secondary importance. Life Science Inventory Check-sheets were written for each candidate nature reserve, documenting its significant features, comparing it to other similar significant sites and providing the rationale for its selection.

Appendix A consists of the check-sheets for candidate nature reserves and the Environmental Data Cards for significant sites, organized within physiographic regions by vegetation-landform features types. Sites are listed within groupings of similar sites, from west to east across each physiographic region. Topographic maps (1:50,000 scale) showing the boundaries of significant sites and candidate nature reserves, and background data, are on file at the Parks and Recreation Section, Ministry of Natural Resources, Central Region, Richmond Hill.

It should be noted that ownership was not generally considered during the evaluation process. Exceptions were Indian Reserve and Department of National Defense lands which are outlined on the 1:50,000 topographic maps. Significant sites on these federally-controlled lands were not recommended as candidate nature reserves, even if they contained the best quality or only example of a major vegetation-landform feature in the site district. The reason for this exception was that these federal lands were considered to be outside of provincial control.

The preparation of this report involved the compilation of existing data on the natural areas of Site District 7-2. This data included available information on Environmentally Sensitive Areas in the Site District, airphoto review, topographic map review, and some contact with individuals knowledgeable about the Site District. A limited amount of time was devoted to field checking of sites in order to assess their current condition and the degree of representation offered by each.

The emphasis of this study was directed towards vegetation-landform features. Therefore, areas of high quality wildlife and fisheries habitat, and special sites such as concentrations of rare or endangered flora and fauna, are generally missing unless otherwise a component of a representative vegetation-landform feature.

3. CANDIDATE NATURE RESERVES

The natural features analysis of the study area identified seven major vegetation-landform features remaining in a relatively natural state: (1) upland forests on sand plain, (2) upland/lowland forests on sand plain, (3) upland/lowland forests on clay plain, (4) river valleys with adjoining upland sites of either sand plain, clay plain or till moraine, (5) shoreline bluffs along Lake Erie, (6) coastal sand dune, ridge, swale and wetland systems along Lake Huron and (7) a major Great Lakes sandspit and marsh system on Lake Erie. Table 1 relates these vegetation-landform features to the physiographic regions found in Site District 7-2, west of the Haldimand Clay Plain. This study sought to illustrate the major natural features of eight of the ten physiographic regions in the study area - the Norfolk Sand Plain, St. Clair Clay Plains, Ekfrid Clay Plain, Bothwell Sand Plain, Horseshoe Moraines, Huron Slope, Huron Fringe and Erie Spits. Together these physiographic regions cover about ninety-two per cent of the total area.

The nature reserve zones proposed for four provincial parks within the study area - Pinery, Ipperwash, Long Point and Turkey Point - provide examples of some important shoreline environments (Lindsay and Hanna, 1980). Pinery offers the most substantial representation. Situated on Lake Huron, Pinery contains a major sequence of coastal sand dunes (foredunes, parabolic dunes, and transverse dunes) ranging from recent to 12,000 years in age. The dune sequence is bisected length wise by the inactive channel of the Ausable River. Eight nature reserve zones have been proposed within the park to include: forested and unforested dunes, river floodplain and important interdunal wet meadows and open dune savanna sites (Lindsay, 1979). A very small wooded dune and interdunal, calcareous, wet meadow complex at Ipperwash Provincial Park (a small recreation park southwest of Port Franks on Lake Huron) complements the features at Pinery, (Lindsay, 1979). On Lake Erie, the wetlands (wet meadow, shrub thickets and marsh) north of the main park road in Long Point Provincial Park have been proposed as a small (110 ha) nature reserve zone (Lindsay, 1979). Similarly at Turkey Point, the forested shorebluff and about 60 ha of wetland (coniferous swamp, deciduous swamp, shrub thickets and cattails) lying below it, along the edge of Turkey Point marsh, form a nature reserve zone in the park (Lindsay, 1979).

Following the review of background information, airphoto interpretation, and limited fieldwork, fifty-five sites in the study area were chosen as significant sites. Significant sites were considered representative of the site district and of at least regional significance. After further evaluation, sixteen of these significant sites were selected as candidate nature reserves because they were the best quality sites representing the major vegetation-landform features of the study area. On Table 1, the candidate nature reserves selected are grouped according to physiographic region. The location of the sixteen candidate nature reserves within the study area is shown on Figure 4. Table 3 summarizes the main features of each candidate nature reserve and compares approximate sizes.

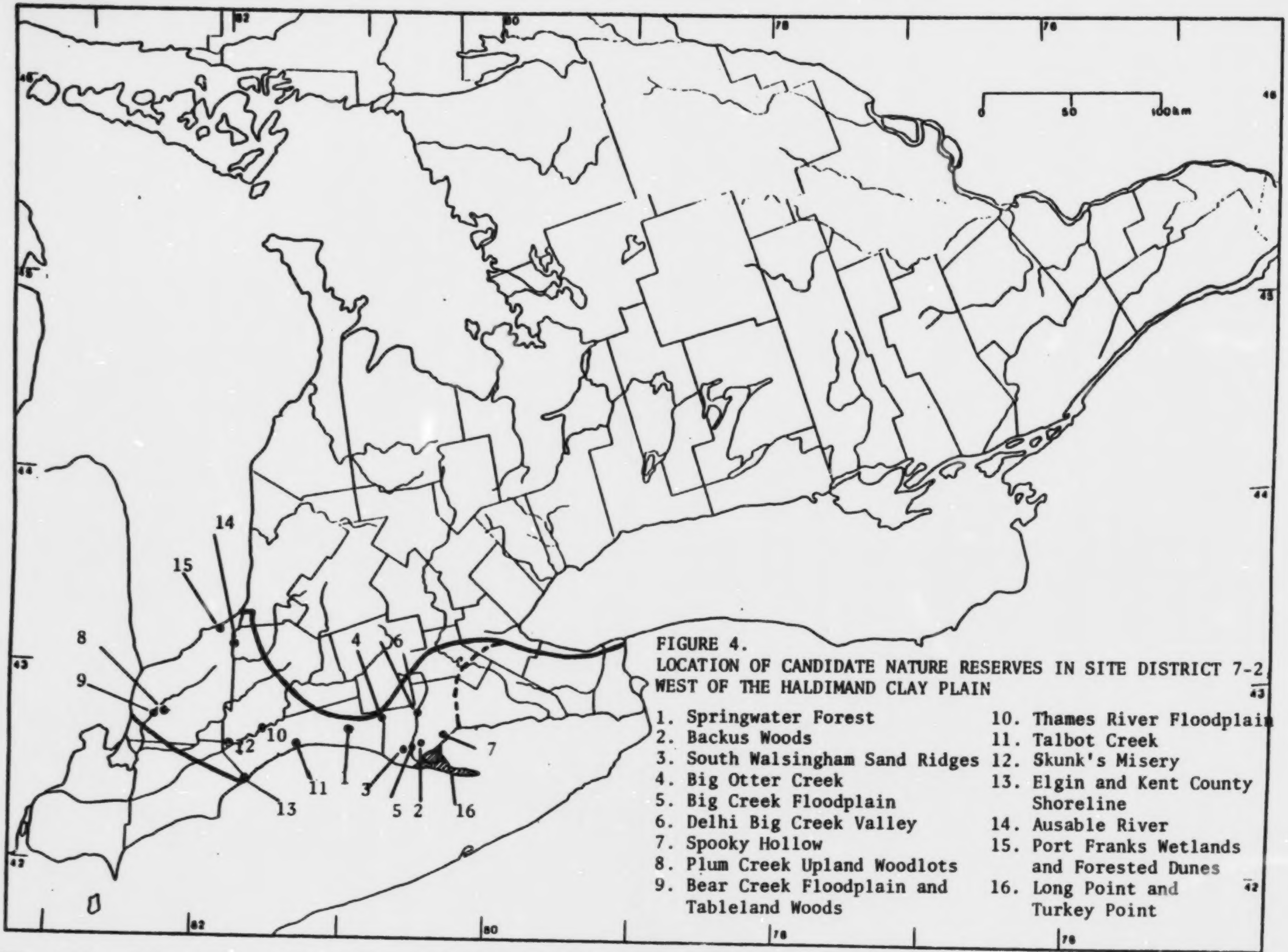
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FIGURE 4.
LOCATION OF CANDIDATE NATURE RESERVES IN SITE DISTRICT 7-2,
WEST OF THE HALDIMAND CLAY PLAIN

1. Springwater Forest
2. Backus Woods
3. South Walsingham Sand Ridges
4. Big Otter Creek
5. Big Creek Floodplain
6. Delhi Big Creek Valley
7. Spooky Hollow
8. Plum Creek Upland Woodlots
9. Bear Creek Floodplain and Tableland Woods
10. Thames River Floodplai
11. Talbot Creek
12. Skunk's Misery
13. Elgin and Kent County Shoreline
14. Ausable River
15. Port Franks Wetlands and Forested Dunes
16. Long Point and Turkey Point

TABLE 3. SUMMARY OF THE MAJOR FEATURES REPRESENTED IN CANDIDATE NATURE RESERVES IN SITE DISTRICT 7-2, WEST OF THE HALDIMAND CLAY PLAIN

CANDIDATE NATURE RESERVE	MAJOR VEGETATION-LANDFORM FEATURES REPRESENTED	VERY APPROXIMATE SIZE (ha)
NORFOLK SAND PLAIN		
Springwater Forest (40I/11 980320)	An exceptionally mature deciduous forest (beech-maple-oak) growing on a loamy sand plain upland. A mixed stand dominated by white pine prevails in the northeast corner of the tract. Springwater Forest is a headwater source for Bradley's Creek, a tributary of Catfish Creek.	185
Backus Woods (40I/9 420230)	Backus Woods is an outstanding example of Carolinian forest, flora and fauna. Sand ridge uplands (oak-red maple-white pine; beech-sugar maple) are separated by wetter, lowlying swamps. A headwater source for Dedrick Creek.	420
South Walsingham Sand Ridges (40I/10 360200)	South Walsingham Sand Ridges is characterized by undulating sand ridges which alternate with wetter lowlying swamps. A headwater source for Big Creek.	420
Big Otter Creek (40I/15 195405)	A 7 km corridor of forested valley rim, slope and floodplain habitats along the deeply incised valley of Big Otter Creek. This site features impressive floodplain stands of sycamore.	500
Big Creek Floodplain (40I/10 380210)	A river valley complex with excellent examples of open floodplain communities - wet meadows, marshes, shrub thickets and oxbow ponds filled with aquatic vegetation.	185

TABLE 3. SUMMARY OF THE MAJOR FEATURES REPRESENTED IN CANDIDATE NATURE RESERVES IN SITE DISTRICT 7-2, WEST OF THE HALDIMAND CLAY PLAIN

CANDIDATE NATURE RESERVE	MAJOR VEGETATION-LANDFORM FEATURES REPRESENTED	VERY APPROXIMATE SIZE (ha)
Delhi-Big Creek Valley (40I/15 400400)	A 5 km, steeply-cut, section along the valley of Big Creek with an excellent variety of vegetation - deciduous floodplains, mixed and deciduous floodplain terraces, cedar swamp, mixed slope forests, oak parklands at the valley rim with small prairie remnants.	250
Spooky Hollow (40I/9 555305)	Includes the valley of Fischer's Creek (with oak-beech-sugar maple slopes, deciduous bottomlands and tamarack-white pine swamp) and sand plain uplands extending west to Crane's Creek (with a mix of young oak woodland, red cedar-sassafras-oak savanna and pine plantation). Part is preserved by the Hamilton Field Naturalists Club.	240
ST. CLAIR CLAY PLAINS		
Plum Creek Upland Woodlots	Two upland (oak-hickory) woodlots situated on bevelled till plain. A small amount of silver maple swamp is present. A headwater source for Plum Creek, a tributary to Black Creek.	210
Bear Creek Floodplain and Tableland Woods (40J/9 900330)	Stream bottomland habitats and an adjoining oak-hickory upland forest.	70
EKFRID CLAY PLAIN		
Thames River Floodplain (40I/12 550315)	This 8 km stretch along the Thames River contains rich, mature floodplain forests composed of black walnut, black maple and hackberry.	240
Talbot Creek (40I/11 695200)	A large river valley complex with high quality, representative upland sugar maple forests growing on a clay plain site.	400

TABLE 3. SUMMARY OF THE MAJOR FEATURES REPRESENTED IN CANDIDATE NATURE RESERVES IN SITE DISTRICT 7-2, WEST OF THE HALDIMAND CLAY PLAIN

CANDIDATE NATURE RESERVE	MAJOR VEGETATION-LANDFORM FEATURES REPRESENTED	VERY APPROXIMATE SIZE (ha)
BOTHWELL SAND PLAIN		
Skunk's Misery (40I/12 340230)	An extensive tract of deciduous upland forest and deciduous swamp. A headwater source for the Thames and Sydenham Rivers.	1100
Elgin and Kent County Shoreline (40I/5 440015)	The largest stretch of steep bluff shoreline remaining in natural habitat (wet woods, shrub thickets and old fields) along the north shore of Lake Erie.	520
HORSESHOE MORAINES AND HURON SLOPE		
Ausable River (40P/4 345740)	An extensive, deep gorge and river valley cut through till moraine and sand plain deposits into bedrock by the Ausable River. This is one of the largest river valley corridors left in a natural condition in Site Region 7.	1400
HURON FRINGE		
Port Franks Wetlands and Forested Dunes (40P/4 265855)	A coastal sand dune, ridge and swale sequence along the Lake Huron coast. Features a rich assemblage of wetlands (shallow pond, marsh, wet meadow, shrub thickets, swamp, bog and fen elements) in an interdunal lowland, lying just south of the cottage area at Port Franks. A succession of wooded dunes continues south almost to Hwy. 21.	480
ERIE SPITS		
Long Point and Turkey Point (40I/9 600110)	A major Great Lakes sand spit and shoreline marsh/wetland system. Much of Long Point is protected by the major landholders - the Long Point Company, the Canadian Wildlife Service and the Long Point Region Conservation Authority.	10270

4. CONCLUSIONS

There are four provincial parks with nature reserve potential within the study area. Pinery, Ipperwash, Long Point and Turkey Point provide examples of important shoreline environments; namely coastal sand dunes on Lake Huron and a Great Lakes sandspit and marsh system on Lake Erie. An additional sixteen candidate nature reserves are recommended to represent the major vegetation-landform features of the study area.

Springwater Forest provides the best representation of upland forests on sand plain. Three candidate nature reserves were chosen to illustrate upland/lowland forest complexes on sand plain sites - Backus Woods, South Walsingham Sand Ridges and Skunk's Misery. An example of upland/lowland forests on clay plain is found in the Plum Creek Upland Woodlots.

River and creek valleys with adjoining uplands make up eight of the candidate nature reserves. Four - Big Otter Creek, Big Creek Floodplain, Delhi-Big Creek Valley and Spooky Hollow - incorporate adjoining sand plain uplands. Three - Bear Creek, Thames River Valley and Talbot Creek - are valleys cut into clay plains. The Ausable River candidate nature reserve has carved a steep-sided gorge through till moraine into the underlying Devonian bedrock and further north across sand plain deposits. Many of these river valleys were selected to provide representation of upland forest types as well as river valley habitats.

Shoreline environments are featured in three candidate nature reserves. The Elgin and Kent County shoreline is the largest stretch of steep, shoreline bluffs remaining in natural habitat along the north shore of Lake Erie. The Port Franks Wetlands and Forested Dunes exemplify a sequence of coastal sand dunes, ridges, swales and well-developed wetlands along Lake Huron. Long Point and Turkey Point on Lake Erie represent a major Great Lakes sandspit and shoreline marsh.

Each of these sixteen candidate nature reserves contributes features, habitats and/or vegetation types not found within the others. Collectively, they illustrate almost all of the major natural features identified as missing from the provincial parks of the site district during the Natural Features Analysis phase. Some natural features were identified for which significant sites were documented, without candidate nature reserves being chosen. Examples are dry, open oak plains, remnant prairies and lowland forests. Further study is required to determine the importance of these features within the site district.

Supplementary fieldwork and documentation of the sixteen candidate nature reserves is also recommended. Because this study was an overview at a broad regional level, there was no opportunity to examine individual sites in detail. Research into the feasibility of protecting candidate nature reserves over the long term is suggested. Present ownership, the designation of the site and surrounding lands in Official Plans and Zoning By-laws, and other environmental factors effecting present use and future stability (such as watershed characteristics) should be investigated.

Candidate nature reserves should either be acquired directly by public agencies such as the Ministry of Natural Resources and Conservation Authorities or by private groups like the Nature Conservancy or Naturalist clubs. Alternatively, the present owners could be encouraged to work cooperatively to protect areas through private landowner agreements. The significant sites identified by this study are also valuable ecological areas which should receive protection through the land-use planning process (i.e., Zoning By-laws, Official Plans).

Many biological sites of regional or local significance have been missed by this study; for example, regionally significant upland forest sites, lowland forests and small prairie remnants. The main purpose of this study was to identify natural areas of provincial interest, and time constraints allowed only for an examination of the study area at a broad overview level. There is a need for a comprehensive study of Environmentally Sensitive Areas within the Haldimand-Norfolk and Elgin portions of the study area.

GLOSSARY

Areas of Natural and Scientific Interest (ANSI): ANSI s are areas of land and water containing natural landscapes or features which have been identified as having values related to protection, natural heritage, scientific study or education. ANSI s may vary in level of significance. The most significant of these, Candidate Nature Reserves in the site district reports, may contribute to the achievement of the Ministry's protection objective. Those which do not contribute to the provincial protection objective are referred to as Significant Sites in the Site District Report.

Candidate Nature Reserve: Candidate nature reserves are sites selected on a systematic basis to represent the natural features and landscapes of Ontario and complement other protected zones in the provincial park system. Candidate nature reserves contain the best examples of the landform and vegetation features of each site district; features that may be of widespread or restricted occurrence within the site district. They are selected after comparison and evaluation of significant sites sharing similar features. Each candidate nature reserve possesses sufficient ecological integrity, buffering capacity and size that protection appears to be a viable management strategy.

Physiographic Region: Chapman and Putnam (1973) described and mapped fifty-two minor physiographic regions within southern Ontario. These physiographic regions are areas with recognizable local landform patterns. Map 1 outlines the physiographic regions that fall wholly or partially within the site district.

Significant Site: A site of at least regional significance and representative of the landform and vegetation features of the site district. Chosen after reviewing the background information available on sites of biological importance, airphoto analysis and field checking of selected areas. After final evaluation and comparison of similar significant sites, some were chosen as candidate nature reserves. However, all significant sites are recommended for protection through the land-use planning process.

Site District: A subdivision of a site region, with a characteristic pattern of physiographic features (Hills, 1959). Site districts are small scale map units that segregate substantial areas from each other on the basis of broad landform patterns. Refer to Figure 1.

Site Region: An area of land within which the response of the vegetation to the features of the landform follows a consistent pattern (Hills, 1959). Refer to Figure 1.

APPENDIX A. CANDIDATE NATURE RESERVE CHECK-SHEETS AND ENVIRONMENTAL DATA CARDS FOR SIGNIFICANT SITES IN SITE DISTRICT 7-2, WEST OF THE HALDIMAND CLAY PLAIN

Page Number

NORFOLK SAND PLAIN
UPLAND FORESTS
Springwater Forest (40I/11 980320) - CNR[1] 31
UPLAND/LOWLAND FORESTS
Backus Woods (40I/9 420230) - CNR 35
South Walsingham Sand Ridges (40I/10 360200) - CNR 37
Mount Salem Forest (40I/10 070295) 39
RIVER VALLEYS WITH ADJOINING UPLANDS
Big Otter Creek (40I/15 195405) - CNR 41
Big Creek Floodplain (40I/10 380210) - CNR 43
Delhi Big Creek Valley (40I/15 400400) - CNR 45
Spooky Hollow (40I/9 555305) - CNR 47
Catfish Creek Slope and Floodplain (40I/11 980255) 49
Big Otter Creek south of Bayham (40I/10 110320) 49
Little Jerry Creek (40I/15 130350) 49
Little Otter Creek Valley (40I/15 230380) 50
DRY OPEN OAK PLAINS
St. Williams Forestry Station (40I/9 440280) 52
Turkey Point Natural Environment Zone (40I/9 545280) 52
SHORELINE ENVIRONMENTS (BLUFFS, BEACHES)
Hawk Cliff (40I/11 855235) 53
Lakeview South (40I/10 095230) 53
Iroquois Beach Provincial Park (40I/10 150210) 53

ST. CLAIR CLAY PLAINS
UPLAND/LOWLAND FORESTS
Plum Creek Upland Woodlots (40J/16 960365) - CNR 55
Sarnia Indian Reserve (40J/6 850530) 57
Clay Creek Woodland (40J/16 850365) 57
Walnut Woodlot (40I/13 260462) 58
RIVER VALLEYS WITH ADJOINING UPLANDS
Bear Creek Floodplain and Tableland Woods (40J/9 900330) - CNR 61
Black Creek (40J/16 050380) 61
Bear Creek southeast of Wyoming (40J/16 125520) 61

EKFRID CLAY PLAIN
RIVER VALLEYS WITH ADJOINING UPLANDS
Thames River Floodplain (40J/12 550315) - CNR 63
Talbot Creek (40I/11 695200) - CNR 65
Brown Creek Woods (40I/13 280490) 67
Tates Bridge Floodplain (40I/12 505285) 67
Big Munday Creek (40I/13 580355) 68
Iona Valleylands (40I/11 700264) 68

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[1] CNR indicates a candidate nature reserve.

EKFRID CLAY PLAIN — Page Number
  CLAY PLAIN WOODLOTS
    Kerwood Woods (40I/13 415545) 69
    Caradoc Indian Reserve (40I/14 400600) 69
    John E. Pearce Provincial Park (40I/11 638170) 69
  SHORELINE ENVIRONMENTS
    Plum Point (40I/11 670180) 71

BOTHWELL SAND PLAIN
  UPLAND/LOWLAND FORESTS
    Skunk's Misery (40I/12 340230) - CNR 73
    West Moraviantown Woods (40I/12 255105) 75
    Moraviantown Indian Reserve Forestlands (40I/12 275130) 75
    East Moraviantown Woods (40I/12 313140) 75
    North Rodney Woodlots (40I/12 443170) 76
    West Lorne Tract (40I/12 485160) 76
    Eagle Woodlots (40I/12 540150) 77
  SHORELINE ENVIRONMENTS, BLUFFS
    Elgin and Kent County Shoreline (40I/5 440015) - CNR 79
  RIVER VALLEYS WITH ADJOINING UPLANDS
    Oakdale Woods and Floodplain (40J/9 175270) 82
    Clear Creek (40I/5 410020) 82
  REMNANT PRAIRIES
    Thamesville Moor (40J/9 173140) 83

HORSESHOE MORAINES
  RIVER VALLEYS WITH ADJOINING UPLANDS
    Ausable River[2] (40P/4 345740) - CNR 85
    Ausable River near Sable (40P/4 410700) 87
  LOWLAND FORESTS
    Oakland Swamp (40P/1 510690) 88

HURON SLOPE
  LOWLAND FORESTS
    McGillvray Twp. Lowland Forest (40P/4 350835) 89

HURON FRINGE
  SAND DUNE RIDGE AND SWALE SYSTEMS; WETLANDS
    Port Franks Wetlands and Forested Dunes (40P/4 265855) - CNR 91
    Gustin Grove Marsh (40O/1 170800) 93
    Kettle Point Indian Reserve (40O/1 180830) 93
    Ipperwash Beach Ridges and Swales (40P/4 215835) 93
    Ipperwash Military Reserve (40P/4 240845) 94

ERIE SPITS
    Long Point and Turkey Point (40I/9 600110) - CNR 95

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[2] Also in the Huron Slope Physiographic Region.

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - Upland Forests

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Springwater Forest (White's Woods)	Port Stanley	40I/11 also on 40I/14	980320

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Elgin	42 ° 45 'N	81 ° 31 'W	ca. 700-750 ft.

LOCALITY 5 km southwest of Aylmer; 2 km east of Catfish Creek

TOWNSHIP Molabride LOTS CONCESSIONS

AREA approx. 450 acres approx. 208 ha

OWNERSHIP

ADMINISTRATION

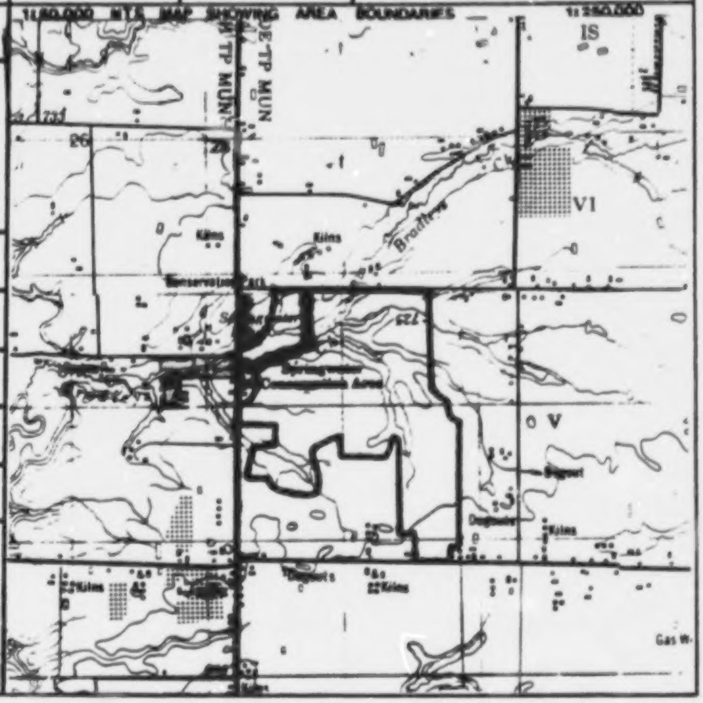
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Aylmer	Catfish Creek C.A.

AERIAL PHOTOGRAPHS BASE MAP: 426811

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	204	4252	208-210
1978	203	4251	133-135

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

At Springwater Forest, an exceptionally mature deciduous forest of beech, red maple and oak with sugar maple, ash and black cherry grows on a slightly undulating sand plain. In the northeast part of this (185 ha) tract, a mixed coniferous forest dominated by white pine, with sugar maple, red maple black cherry, white ash and oak prevails. The soils are mapped mainly as Oshtemo loamy sand, which would be classed as a loam site type. Granby sand is found in the south part.

The headwaters of Bradley's Creek, a tributary of Catfish Creek, rise within the forest and along the slopes of the Tillsonburg moraine lying to the south and east. Several tributary streams dissect the forested upland and feed into Springwater Pond, the former millpond. Along their valleys are forests of oak, beech and maple mixed with yellow birch, black ash, blue beech, red maple and elm and numerous seepage areas. Marsh and dogwood - willow thickets have developed in the valley mouths near their outlets into Springwater Pond. A small pond, completely surrounded by forest, ringed by thickets of highbush blueberry *(Vaccinium corymbosum)*, winterberry *(Ilex verticillata)* and chokeberry *(Aronia melanocarpa)*, and filled with *Carex lacustris - Calamagrostis* marsh lies south of Springwater Pond. These valley bottomlands and wetlands add to the variety of habitats within the Springwater tract.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES Lindsay and Macdonald, Oct. 1976, Brief field notes; Lindsay, 1977-80, Brief field visits; 1981, airphoto Interpretation; Argus and White, 1977; Brooman, 1954. p.34; IBP, 1972; Edwards, 1969; James et al. 1976; Johnston, 1970; Peck, 1981, personal communication with Lindsay, Speirs & Frank, 1970; Soil Map of Elgin County, 1928.

EVALUATION AND PRIORITIES

Springwater Forest is the best example of maple-beech-oak upland forest in Site District 7-2. A very high priority for protection.

DATE COMPILED	COMPILER
8 May 1981	K.M. Lindsay

Springwater Forest was the first breeding location for Hooded Warblers in Ontario, and is still one of a very few locations where this southern warbler has been know to nest in Ontario (Brooman, 1954; Speirs and Frank, 1970; James et al, 1976; Peck, 1981, personal communication with Lindsay). Also of special note, are nesting Pileated Woodpeckers, another bird species which requires a good-sized tract of deciduous forest. Autumn coralroot orchid (*Corallorhiza odontorhiza*) is one of the rare plants dependent on this forest.

Of course, Springwater Forest has been disturbed by selective logging in the past and more recently by the clear cutting of two, 2 ha blocks within the core of the tract and the planting these clearings to oak. Some pine reforestration borders the north and west sides. The parts of the forest which extend south onto the moraine are younger.

Despite these disturbances, Springwater Forest is the best example of upland beech-maple and pine-maple-oak forest, growing on a loam site, in the Norfolk sand plain. Compared with other sites elsewhere in the site district, Springwater Forest is outstanding in terms of its quality, extent and diversity.

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Springwater Forest (White's Woods)	40I/11	980320

BRIEF DESCRIPTION

Extends onto 40I/14. At Springwater Forest, 5 km southwest of Aylmer, an exceptionally mature deciduous forest of beech, red maple, oak with sugar maple, ash and black cherry grows on a slightly undulating sand plain. A mixed coniferous forest dominated by white pine prevails in the northeast corner of this 185 ha tract. Stream bottomlands, a mill pond, and a marshy pond ringed by shrub thickets add to the variety of habitats within the area. The headwaters of Bradleys Creek, a tributary of Catfish Creek, rise in this forest. An outstanding candidate nature reserve.

SOURCES

Lindsay, 1976-1980, Brief field visits; 1981, Airphoto Interpretation; Brooman, 1954; Speirs and Frank, 1970.

[illegible]	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Macdonald, Oct. 1976			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD	ONTARIO MINISTRY OF NATURAL RESOURCES PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION 3rd FLOOR WHITNEY BLOCK QUEEN'S PARK, TORONTO M7A 1W3

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - Upland/Lowland Forests

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME Backus Woods	MAP NAME Long Point	MAP NUMBER 40I/9 Also on 40I/10	UTM REF. 420230

COUNTY, DISTRICT or REGIONAL MUNICIPALITY Haldimand - Norfolk	LAT. 44 ° 40 ' N	LONG. 80 ° 29 ' W	ALT. MIN. MAX. ca. 650-700 ft.

LOCALITY 5 km northwest of Port Rowan, west of Dedrick Creek

TOWNSHIP South Walsingham

LOTS

CONCESSIONS

AREA approx. 1040 acres approx. 420 ha

OWNERSHIP

ADMINISTRATION

FOREST REGION AND DISTRICT D-1

SITE REGION AND DISTRICT 7-2

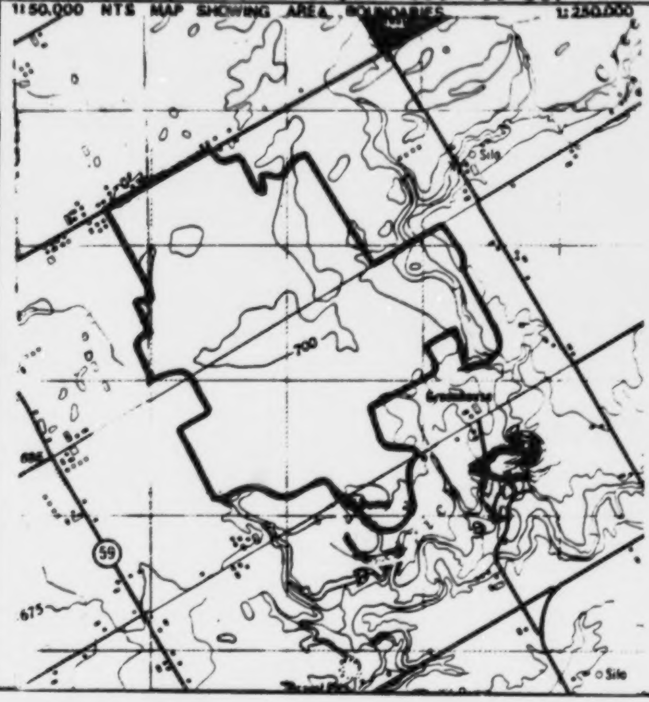
MNR REGION AND DISTRICT SW-Simcoe

CONSERVATION AUTHORITY Long Point C.A.

AERIAL PHOTOGRAPHS BASE MAP: 426802

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	214	4247	101-104
1978	214	4246	81-84

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Backus Woods lies near the southern limit of the Norfolk sand plain, on gently undulating terrain composed of low ridges separated by lowlying, wetter, plains. This large forest tract is well known throughout southern Ontario to biologists and naturalists alike, for its excellent examples of Carolinian forest, flora and fauna. Stands of oak, red maple and white pine characterize the driest sandy ridges; flowering dogwood (*Cornus florida*) is a frequent understory shrub. Forests of beech and sugar maple with occasional red maple, red oak, yellow birch, white ash, basswood and tulip-tree dominate other upland sites. Between the ridges, where drainage is imperfect, are deciduous lowlands or spring swamps of silver maple-yellow birch-white elm; black gum-red maple-ash; swamp white oak-silver maple, etc. A few of the wettest depressions hold small, shallow pools ringed by shrub thickets of buttonbush (*Cephalanthus occidentalis*), winterberry (*Ilex verticillata*) and dogwood (*Cornus obliqua*).

The stream habitats found along Dedrick Creek, at the east edge of the forest where clay soils are exposed, add to the diversity of the Backus tract. Along the meandering stream course are wet sedge and herbaceous meadows, alder-dogwood thickets, ash swamp, and mixed hemlock-red maple-yellow birch-beech forest. Slopes covered with hemlock and sugar maple-beech-hemlock rise from the floodplain. Past selective

DATA SHEETS ATTACHED

- PHYSICAL DESCRIPTION ☐
- VEGETATION SUMMARY ☐
- EVALUATION SHEET ☐
- COMMUNITY DESCRS. ☐
- COMMUNITY COMP. LISTS ☐
- SUMMARY SPECIES LISTS ☐
- PHYSICAL FEATURES MAP ☐
- VEGETATION MAP ☐
- BIBLIOGRAPHY ☐
- PHOTOGRAPHS ☐

MAJOR INFORMATION SOURCES

Lindsay, August 1976, Brief field notes; 1981 Airphoto Interpretation; IBP, 1971; Argus and White, 1977; Catling and Whiting, 1976; Cruise and Catling, 1969: Cruise, 1969; Speirs, 1971, 1977; Whiting, 1981, personal communication with Lindsay.

EVALUATION AND PRIORITIES

Backus Woods is the best example of an upland/lowland forest complex on the Norfolk Sand Plain. A very high priority for protection.

DATE COMPILED 6 May 1981

COMPILER K. M. Lindsay

logging and access trails are some of the impacts that have effected this forest tract.

A number of rare Carolinian species - stands of black gum (*Nyssa sylvatica*), tulip-tree (*Liriodendron tulipifera*), swamp white oak (*Quercus bicolor*) and flowering dogwood (*Cornus florida*) - flourish at Backus Woods. This is the only extant site for the whorled pogonia orchid (*Isotria verticillata*) in Canada. A breeding bird census in part of the forest recorded such Carolinian species as Cerulean Warbler, Yellow-throated Vireo and Yellow-billed Cuckoo (Speirs, 1977).

Backus Woods should be given a very high priority for protection. It provides an excellent example of the natural forests of the Deciduous Forest Region which are fast disappearing. The combination of sand ridge uplands, wet lowland plains and a stream valley produces a high diversity of habitats. The large size of Backus Woods relative to other forest tracts in this site idstrict and site region adds to its value as a natural benchmark area. Further research on the phytosociology, ecology, flora and fauna of Backus Woods is recommended.

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - Upland/Lowland Forests

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
South Walsingham Sand Ridges	Port Burwell	40I/10	360200

COUNTY, DISTRICT or REGIONAL MUNICIPALITY Haldimand - Norfolk

LAT. 42° 38'N **LONG.** 80° 34'W **ALT. MIN. MAX.** ca. 625 - 675 ft.

LOCALITY 5 km southwest of Walsingham; immediately west of Big Creek

TOWNSHIP South Walsingham **LOTS** **CONCESSIONS**

AREA approx. 1040 acres approx. 420 ha

OWNERSHIP

ADMINISTRATION

FOREST REGION AND DISTRICT D-1

SITE REGION AND DISTRICT 7-2

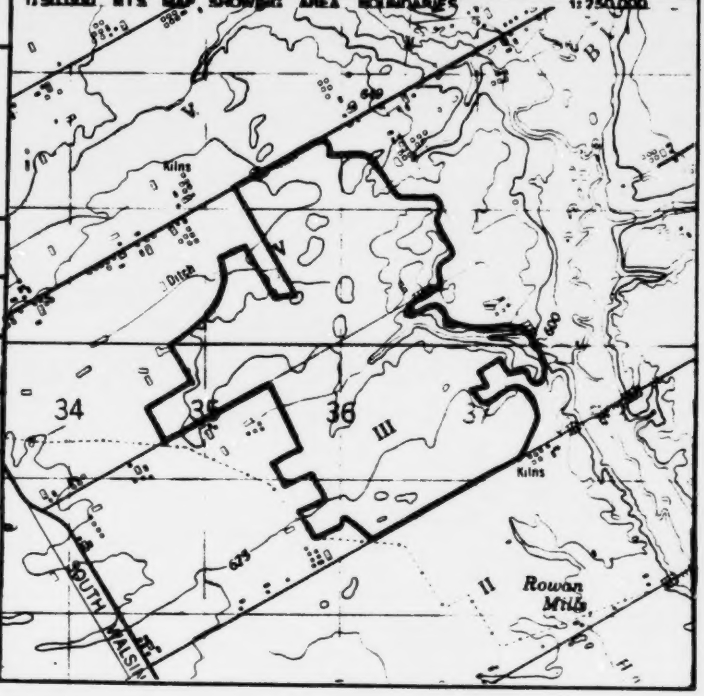
MNR REGION AND DISTRICT SW-Simcoe

CONSERVATION AUTHORITY Long Point C.A.

AERIAL PHOTOGRAPHS BASE MAP: 426803

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	214	4245	226-228
1978	282	4244	19-22

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Within the South Walsingham Sand Ridges area, a combination of undulating sand ridges (from 3 to 7 m in height) and wetter, lowlying plains creates a varied landscape. The dry to dry mesic slopes and crests of the ridges are wooded with oak and white pine. Deciduous lowlands and swamps (silver maple, red maple, yellow birch, ash, bitternut and tulip-tree) stretch between the ridges. Carolinian species such as sassafras, black oak, tulip-tree and flowering dogwood (*Cornus florida*) are well represented. Poke milkweed (*Asclepias exaltata*) and the Black Rat Snake have been reported. A few plots of coniferous reforestation are scattered through the forest. Parts of this site are variously disturbed by selective cutting, forest management and forest access roads.

The South Walsingham Sand Ridges is a large, diverse area offering representation of a sand ridge and lowland forest tract typical of the Norfolk sand plain. The vegetation-landform features found here are similar in some ways to those at Backus Woods (40I/9 420230). The South Walsingham Sand Ridges adjoins another candidate nature reserve, Big Creek Floodplain (40I/10 380215).

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION ☐
VEGETATION SUMMARY ☐
EVALUATION SHEET ☐
COMMUNITY DESCRS. ☐
COMMUNITY COMP. LISTS ☐
SUMMARY SPECIES LISTS ☐
PHYSICAL FEATURES MAP ☐
VEGETATION MAP ☐
BIBLIOGRAPHY ☐
PHOTOGRAPHS ☐

MAJOR INFORMATION SOURCES

Lindsay, August 1976, Brief field notes; 1981, Airphoto Interpretation; IBP, 1970; Argus and White, 1977; Fox and Soper, 1952, 1953, 1954; Soper, 1955, 1962 .

EVALUATION AND PRIORITIES

Another good example of an upland/lowland forest complex typical of the Norfolk Sand Plain.

DATE COMPILED 5 May 1981

COMPILER K. M. Lindsay

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - Upland/Lowland Forests

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Mount Salem Forest	40I/10	070295

BRIEF DESCRIPTION

North and east of Mount Salem is a ca. 240 ha block of forest on gently undulating sand plain. Sugar maple, beech, hemlock and yellow birch grow on the low ridges. Linear-shaped swamps of silver maple with some ash and elm lie between the ridges. The tract is variously disturbed and includes some plantation. This is the only location known in Canada for the smaller whorled pogonia orchid (*Isotria medeoloides*), one of Ontario's endangered species.

SOURCES Macdonald, 1981, personal communication with Lindsay; Lindsay, 1981, Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	South Walsingham Sand Ridges	40I/10	360200

BRIEF DESCRIPTION

Lying immediately west of Big Creek, 5 km southwest of Walsingham is approximately 420 ha of forest on undulating sand ridges rising above wetter, low-lying plains. The ridges are wooded with oak and pine; the lowlands contain deciduous forest and swamp (silver maple, red maple, yellow birch, ash, bitternut hickory and tulip-tree). Carolinian species and rare species such as Black Rat Snake and poke milkweed *(Ascelpias exaltata)* are present. A candidate nature reserve.

SOURCES Lindsay, 1976, Airphoto Interpretation; IBP, 1970; Argus and White, 1977

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay August 1976			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Backus Woods	40I/9	420230

BRIEF DESCRIPTION

Extends onto 40I/10. This large forest tract (approx. 400 ha) located 5 km northwest of Port Rowan is an outstanding example of Carolinian forest, flora and fauna. Low sand ridges separated by wetter, low-lying plains form a varied landscape. Woods of oak-maple-pine and beech-sugar maple grow on the ridges and upland sites. Spring swamps, deciduous lowlands, small pools and wet thickets occupy the plains. Backus is the only extant site for *Isotria verticillata* in Canada. A candidate nature reserve.

SOURCES Lindsay, 1976, 1981, Airphoto Interpretation; IBP, 1971, Cruise & Catling, 1969, Speirs, 1971, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay August 1976			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Big Otter Creek	Tillsonburg	40I/15	195405

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Elgin and Haldimand-Norfolk	42° 49' N	80° 46' W	ca. 650 - 775 ft.

LOCALITY along Big Otter Creek, about 1.5 km south of Tillsonburg

TOWNSHIP **LOTS** **CONCESSIONS**
Bayham
Middleton

AREA
approx. 1400 acres approx. 647 ha

OWNERSHIP

ADMINISTRATION

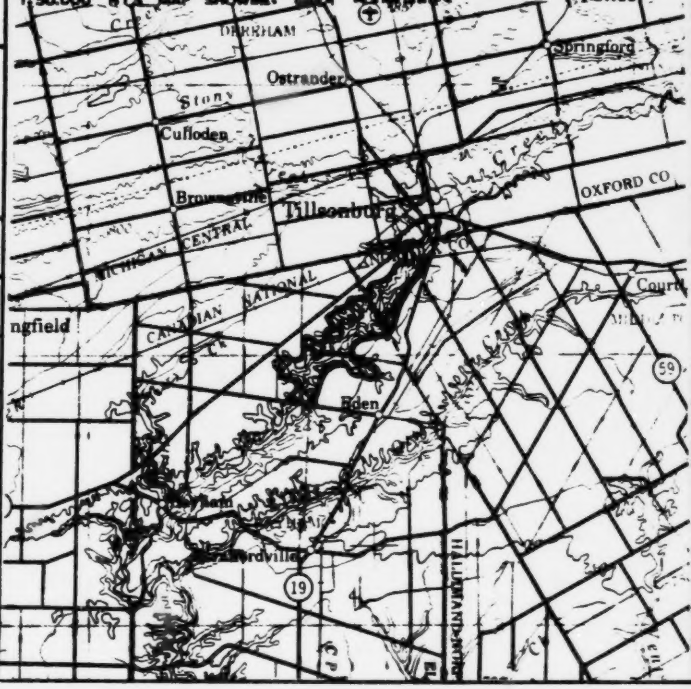
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Aylmer	Long Point C.A.

AERIAL PHOTOGRAPHS
BASE MAP: 427804

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	252	4258	78-82
1978	205	4257	54-57
1978	252	4256	94-98

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

A large, relatively intact, natural corridor follows the deeply incised, meandering valley of Big Otter Creek for about 7 km south from Tillsonburg. It encompasses steep forested valley slopes and a rather broad floodplain vegetated with deciduous forests of variable ages along with some open floodplain communities. Lining the riverbank levees and reaching back onto alluvial flats are impressive stands of sycamore - willow- cottonwood - manitoba maple and black maple - basswood - ash - blue beech. These are the most extensive stands of sycamore that the author has seen in southern Ontario. Younger bottomland forests and thickets in various stages of succession include hawthorn - basswood - black maple - white elm; ash - basswood - blue beech - shagbark hickory. Shrub thickets (dogwood - ninebark - willow - riverbank grape) and tall herbs such as jewelweed, ostrich fern and dame's rocket are found in openings and along the riverbanks.

The east and north-facing slopes and tributary ravines tend to be dominated by hemlock with some yellow birch and red maple. Deciduous cover is more prevalent on the west and south-facing slopes (red oak - white oak - sugar maple - white pine - beech; beech - sugar maple - hemlock - oak). The forests located in a narrow band along the valley rim are young and quite disturbed, generally a mixed oak-pine association (red oak, white oak, white pine, sugar maple and large-toothed

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION ☐
VEGETATION SUMMARY ☐
EVALUATION SHEET ☐
COMMUNITY DESCRS. ☐
COMMUNITY COMP. LISTS ☐
SUMMARY SPECIES LISTS ☐
PHYSICAL FEATURES MAP ☐
VEGETATION MAP ☐
BIBLIOGRAPHY ☐
PHOTOGRAPHS ☐

MAJOR INFORMATION SOURCES

Lindsay, September, October, 1976, Brief field notes; 1981, Airphoto Interpretation; Oxford County ESA, 1976; Sensitive Areas Report, 1976; IBP, 1971.

EVALUATION AND PRIORITIES

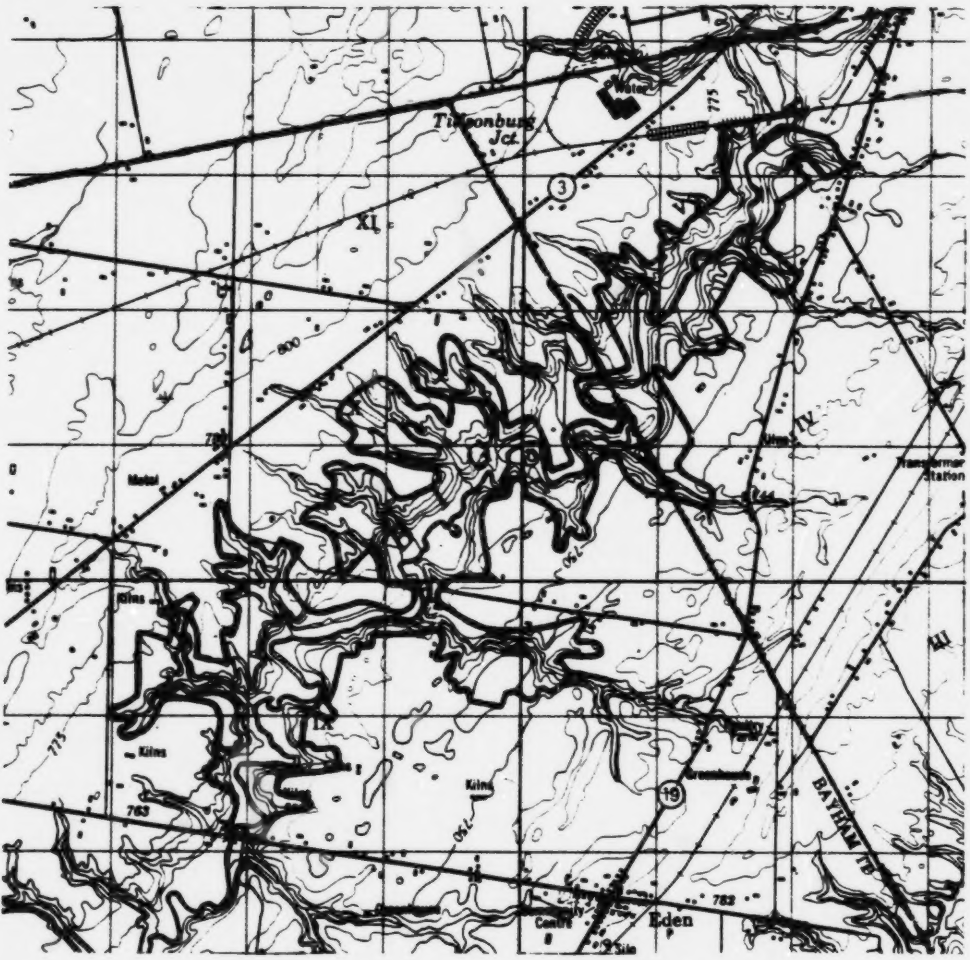
A relatively intact, forested river valley section with exceptional deciduous bottomland stands.

DATE COMPILED	COMPILER
13 May 1981	K. M. Lindsay

aspen).

The Big Otter Creek area is surrounded by agricultural land. A few sections along the floodplain and slopes have been cleared. Gravel concession roads cross the valley at two junctures.

Big Otter Creek offers excellent representation of a relatively intact, river valley system and exceptional deciduous bottomlands. This, in combination with its condition, diversity and size make Big Otter Creek a high-ranking candidate nature reserve.



Tillsonburg Jct.
3
XI
800
775
IV
Transformer Station
Kilns
Kilns
763
19
790
BAYHAM TP
782
Centre
Eden

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - River Valleys with adjoining Uplands

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Big Creek Floodplain	Port Burwell	40I/10	380210

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Haldimand - Norfolk	42° 39'N	80° 32'W	ca. 600-650 ft.

LOCALITY on Big Creek, 3 km SSW of Walsingham

TOWNSHIP LOTS CONCESSIONS
South Walsingham

AREA
approx. 455 acres approx. 210 ha

OWNERSHIP

ADMINISTRATION

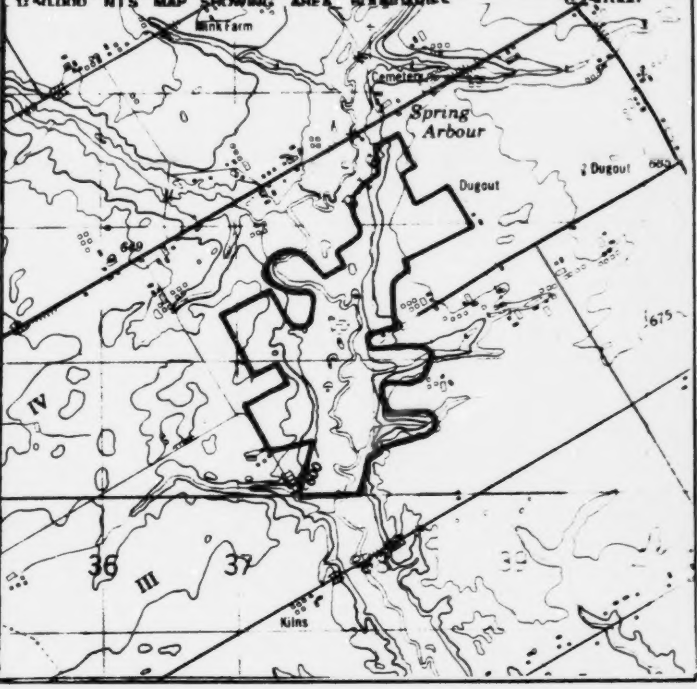
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Simcoe	Long Point C.A.

AERIAL PHOTOGRAPHS BASE MAP: 422803

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	214	4245	228-230
1978	282	4244	22, 23

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Excellent examples of open floodplain communities remain along Big Creek at this location. The rather broad floodplain holds stranded meander pools with submerged, floating and emergent aquatic vegetation, wet forb and shrub meadows, cattail swards, buttonbush - willow - dogwood thickets, and seasonally inundated groves of deciduous floodplain forest (willow, sycamore, black walnut) situated on riverbank levees or raised portions of the floodplain. The north-facing valley slopes and tributary ravines support mixed forests of hemlock with white pine, yellow birch, red maple and beech in good condition. The south and east-facing slopes are wooded with sugar maple and some beech and hemlock. Portions of these slopes have been recently disturbed by selective logging. Dry oak-pine sandland forests occur along the valley rim. Only a small part of the floodplain has been cleared for cultivation.

The Big Creek Floodplain candidate nature reserve was chosen to represent the open floodplain communities of river valley systems; habitats which are disappearing rapidly throughout the Norfolk sand plain region as drainage projects facilitate the conversion of floodplains to agricultural land. It is a large natural unit with a diversity of habitats and wildlife. On the south it connects with another candidate nature reserve, the South Walsingham Sand Ridges (40I/10 360200).

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION ☐
VEGETATION SUMMARY ☐
EVALUATION SHEET ☐
COMMUNITY DESCRS. ☐
COMMUNITY COMP. LISTS ☐
SUMMARY SPECIES LISTS ☐
PHYSICAL FEATURES MAP ☐
VEGETATION MAP ☐
BIBLIOGRAPHY ☐
PHOTOGRAPHS ☐

MAJOR INFORMATION SOURCES

Lindsay, August, 1976, Brief field notes; 1981, Airphoto Interpretation.

EVALUATION AND PRIORITIES

A river valley complex with the best examples of open floodplain communities (wet meadows, marshes, shrub carr, oxbow ponds) seen by the author in Site District 7-2.

DATE COMPILED	COMPILER
13 May 1981	K. M. Lindsay

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - River Valleys with adjoining Uplands

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Delhi Big Creek Valley	Tillsonburg	40I/15	400400

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. – MAX.
Haldimand - Norfolk	42 ° 49 'N	80 ° 31 'W	ca. 650 - 775 ft.

LOCALITY along Big Creek between Delhi and Lynedoch

TOWNSHIP / **LOTS** / **CONCESSIONS**
Middleton
Charlotteville

AREA approx. 715 **acres** approx. 330 **ha**

OWNERSHIP

ADMINISTRATION

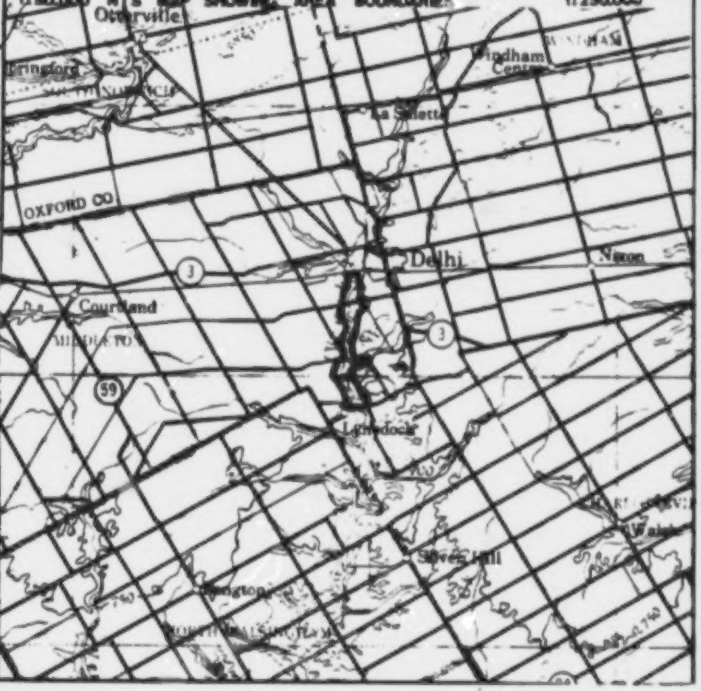
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Simcoe	Long Point C.A.

AERIAL PHOTOGRAPHS **BASE MAP:** 427803

YEAR	ROLL	FLIGHT LINE	NUMBERS
1972	23	4235	106-108
1972	8	4234	141, 142

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

A steep-sided valley dissects the Norfolk sand plain along Big Creek for about 5 km between Delhi and Lynedoch. Near the south end of the valley, the river also cuts through a low moraine ridge which crosses the valley in a northeast-southwest direction. Mixed forests, which vary considerably in relation to slope exposure, soil moisture and stand history, cover the valley slopes (cedar - hemlock - ash - yellow birch - white birch - basswood - elm; sugar maple - beech - ash - hemlock; oak - white pine - sugar maple - hemlock; cedar - white birch - hemlock, etc.). Seepage areas are frequent along the slopes.

Closed and semi-open associations of cottonwood, willow, black walnut, manitoba maple, blue beech, ash, cedar and elm, along with shrub thickets, characterize floodplain and riverbank habitats along the meandering course of Big Creek. Other bottomland sites consist of drier, more elevated, floodplain terraces and wetter, lower, floodplain depressions (which are indicators of former stream meanders and channels). Stands of white pine; cedar-ironwood-beech-ash; and birch-ash-black maple-poplar-beech-hemlock were noted on floodplain terraces. Cedar swamp composed of cedar-yellow birch-red maple-willow-poplar-white birch-white pine occurs in one floodplain depression, flanking the river.

DATA SHEETS ATTACHED
PHYSICAL DESCRIPTION ☐
VEGETATION SUMMARY ☐
EVALUATION SHEET ☐
COMMUNITY DESCRS. ☐
COMMUNITY COMP. LISTS ☐
SUMMARY SPECIES LISTS ☐
PHYSICAL FEATURES MAP ☐
VEGETATION MAP ☐
BIBLIOGRAPHY ☐
PHOTOGRAPHS ☐

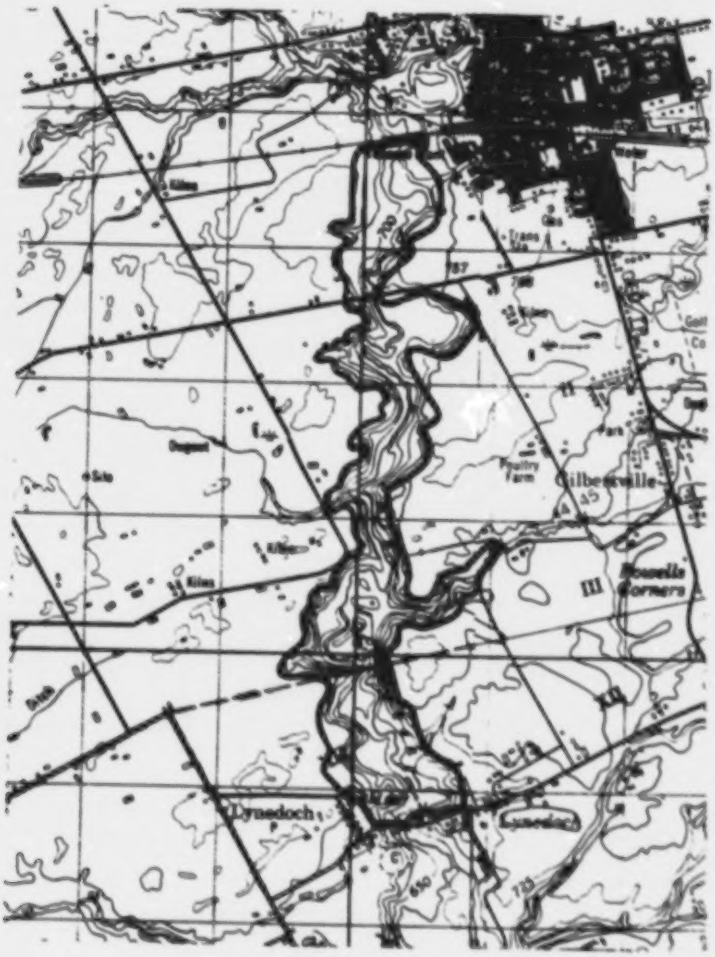
MAJOR INFORMATION SOURCES Lindsay, September - October, 1976, Brief field notes; 1981, Airphoto Interpretation.

EVALUATION AND PRIORITIES
A relatively intact, river valley corridor illustrating an excellent variety of typical valley rim, slope and bottomland types.

DATE COMPILED	COMPILER
14 May 1981	K. M. Lindsay

Edging the rim of the valley are young dry oak parklands (oak - pine - large-toothed aspen) and occasional small prairie remnants with beardgrass (*Andropogon scoparius*), butterfly milkweed (*Asclepias tuberosa*), flowering spurge (*Euphorbia corollata*), sunflower (*Helianthus strumosus*), roundhead bush-clover (*Lespedeza capitata*) and seneca snakeroot (*Polygala senega*). Other plants of note, found in the valley, are white camass (*Zigadenus elegans*) and *Viola triloba*.

Delhi Big Creek Valley was chosen as a candidate nature reserve because it illustrates an excellent variety of typical valley rim, slope and bottomland valley vegetation. Its condition overall is very good.



SITE DISTRICT 7-2: NORFOLK SAND PLAIN - River Valleys with adjoining Uplands

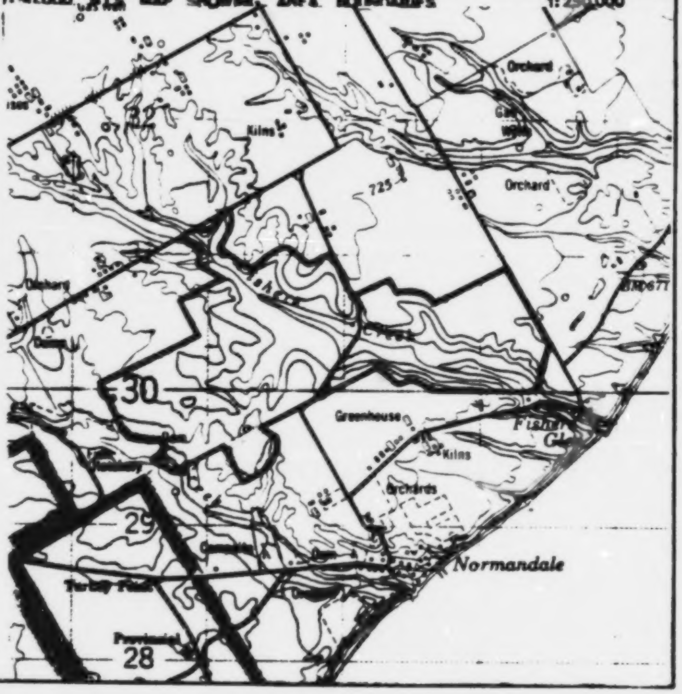
ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Spooky Hollow	Long Point	40I/9	555305

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Haldimand - Norfolk	42° 44′N	80° 19′W	ca. 625 - 725 ft.

LOCALITY 4 km northeast of Turkey Pt. along Fischers Creek, just north of Lake Erie

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



TOWNSHIP LOTS CONCESSIONS

Charlotteville

AREA

approx. 631 acres approx. 290 ha

OWNERSHIP

ADMINISTRATION

FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Simcoe	Long Point C.A.

AERIAL PHOTOGRAPHS

BASE MAP: 426802

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	254	4251	16-20
1978	202	4250	115-119

PHYSICAL AND BIOLOGICAL FEATURES

The Spooky Hollow candidate nature reserve extends along Fischers Creek for 2.5 km north of Fischers Glen on the Lake Erie shoreline and takes in adjacent uplands west to Cranes Creek. Fischers Creek has cut a narrow, steep-sided valley into a clay plain lying along the southern edge of the Norfolk sand plain. However, the soils of the uplands and valley slopes are sandy because a shallow sand deposit overlies the clay plain. Young deciduous woods (red oak - beech - sugar maple) cover the sandy valley slopes. The narrow, valley bottomland supports wet mesic mixed forest (hemlock, yellow birch, white oak, red maple, red oak, white pine), wet deciduous forest (white elm, yellow birch, white ash, black ash, white cedar) and a small tamarack - white pine swamp.

A mixture of young oak woodland (red oak - black oak - white oak), red cedar - sassafras and red cedar - bur oak savanna, combined with pine reforestation plots grows on the adjoining, gently rolling, sandy, uplands. On the west, the upland connects the Spooky Hollow ravine to adjacent forestland at Turkey Point Provincial Park, the Provincial Forestry Station and Provincial Fish Hatchery lands.

White milkweed (*Asclepias verticillata*), green milkweed (*Asclepias viridiflora*), autumn coralroot orchid (*Corallorhiza odontorhiza*), bayberry (*Myrica pensylvanica*),

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Lindsay, August, 1976, Brief Field visit; 1981, Airphoto Interpretation; Shivas, 1972, Spooky Hollow Sanctuary Plant List; IBP, 1970; Argus and White, 1977.

EVALUATION AND PRIORITIES

A large, diverse natural area featuring river valley habitats, sand plain uplands and many rare and unusual species. Part already protected by the Hamilton Naturalist Club

DATE COMPILED	COMPILER
26 May 1981	K. M. Lindsay

moss pink (*Phlox subulata*), early buttercup (*Ranunculus fascicularis*), goat's rue (*Tephrosia virginiana*) and birdsfoot violet (*Viola pedata*) are among the many provincially rare plants reported. Two IBP sites are incorporated within this approximately 240 ha area. One of these, the Spooky Hollow Sanctuary, is owned and preserved by the Hamilton Field Naturalists Club. A recent trailer park development threatens the integrity of this otherwise well preserved, candidate nature reserve. The headwaters of Fischers Creek, which rise only 1.5 km to the north, should also be protected.

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - River Valleys with adjoining Uplands

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Catfish Creek Slope and Floodplain	40I/11	980255

BRIEF DESCRIPTION Approx. 170 ha. of forested rim, slope and floodplain habitats along the meandering, broad valley of Catfish Creek. This area incorporates several tributary streams. Selected from airphoto analysis as the largest and best-preserved section along Catfish Creek. No field data available. About 3 km. north of Lake Erie and Port Bruce.

SOURCES Lindsay, 1976, 1981, Airphoto Interpretation

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Big Otter Creek south of Bayham	40I/10	110320

Also on 40I/15

BRIEF DESCRIPTION A large block (ca. 300 ha. in size) of forested valley slopes, floodplains and terraces extends along the deeply incised valley of Big Otter Creek for about 4 km. south from Bayham. The valleys of two tributaries - South Creek and Moore's Creek-are included. Hemlock slopes which contain some sugar maple, beech and yellow birch; mixed deciduous-hemlock forests, and sycamore-willow-aspen floodplains are examples of the vegetation.

SOURCES Lindsay, 1976, 1981, Airphoto Interpretation; Sensitive Area Report, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

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3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Little Jerry Creek	40I/15	130350

BRIEF DESCRIPTION Immediately north of Bayham, this area features about 130 ha. of a river valley habitats with natural vegetation intact. Little Jerry Creek empties in Big Otter Creek near Bayham. Mixed woods of sugar maple, basswood, ironwood, blue beech, black maple, hemlock, hawthorn and red oak cover the steep valley slopes and adjacent uplands. Floodplains support willow, black walnut, oak and aspen.

SOURCES Lindsay, 1976, 1981, Airphoto Interpretation; Sensitive Area Report, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

1981

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - River Valleys with adjoining Uplands

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Big Otter Creek	40I/15	195405

BRIEF DESCRIPTION A large (approx. 500 ha.) relatively intact, natural corridor follows the deeply incised, meandering valley of Big Otter Creek for about 7 km south from Tillsonburg. Impressive forests of sycamore-willow-cottonwood-manitoba maple & black maple-basswood-ash-blue beech grow on the broad floodplains, along with, younger bottomland forests (hawthorn-basswood-black maple-white elm; ash-basswood-blue beech-shagbark hickory), shrub thickets & tall forb meadows. Hemlock, sugar maple, oak, beech and white pine line the steep valley slopes & tributary ravines. Two gravel roads divide valley into 3 sections. A candidate nature reserve.

SOURCES Lindsay, 1976, 1981, Airphoto Interpretation; Oxford E.S.A., 1976; Sensitive Areas Report, 1976; IBP, 1971.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Sept. Oct., 1976			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD
ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3
1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Little Otter Creek Valley	40I/15	230380

BRIEF DESCRIPTION Lying 7 km south of Tillsonburg, this ca. 100 ha. site includes a cross-section of upland and valley bottomland habitats along Little Otter Creek. Representative deciduous sandland forest (beech-sugar maple-white oak; beech-red oak-white ash) enclose valley bottomlands which contain white ash-basswood-black maple forest and semi-open scrubland (ironwood-balsam poplar-beech-white elm). Glade fern *(Athyrium pycnocarpon.)* is reported.

SOURCES Lindsay, 1981, Airphoto Interpretation; IBP, 1971.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD
ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3
1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Big Creek Floodplain	40I/10	380210

BRIEF DESCRIPTION Excellent examples of open floodplain communities remain along Big Creek, 3 km. SSW of Walsingham. The rather broad floodplain holds stranded meander pools with submerged, floating and emergent aquatic vegetation, wet forb and shrub meadows, cattail swards, buttonbush-willow-dogwood thickets, and groves of deciduous floodplain forest (willow, sycamore, black walnut). The valley slopes and tributary ravines support hemlock, mixed, and deciduous forests, while oak-pine woods grow at the valley rim. Portions of slopes have been logged. A candidate nature reserve.

SOURCES Lindsay, 1976, 1981 Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay August 1976			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD
ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3
1981

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - River Valleys with adjoining Uplands

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Delhi Big Creek Valley	40I/15	400400

BRIEF DESCRIPTION For about 5 km between Delhi and Lynedoch along Big Creek, a steep-sided valley dissects the Norfolk Sand Plain. An excellent variety of vegetation types cover the rim, slopes and bottomlands of this ca. 250 ha. site. Closed and semi-open associations of cottonwood, willow, black walnut, manitoba maple, blue beech, ash, cedar and elm, along with shrub thickets, characterize floodplain & riverbank habitats along Big Creek. Drier floodplain terraces and wetter floodplain depressions containing swamps also occur. Edging the valley rim are young oak parklands and prairie remnants. A candidate nature reserve.

SOURCES Lindsay, 1976, 1981, Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Sept. Oct. 1976			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Spooky Hollow	40I/9	555305

BRIEF DESCRIPTION Spooky Hollow includes the valley of Fischer Creek, for 2.5 km north of Fischer's Glen on Lake Erie, and sandplain uplands extending west to Cranes Creek. A mix of young oak woodland, red cedar-sassafras-oak savanna and pine representation blankets the upland. Along the valley are young oak-beech-sugar maple slope forests, wet deciduous bottomlands and tamarack-pine swamp. Many rare plants reported. Part owned by Hamilton Naturalists Club; part threatened. A candidate nature reserve.

SOURCES Lindsay, 1976, 1981, Airphoto Interpretation; Shivas, 1972; IBP, 1970; Argus and White, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay August 1976			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	St. Williams Forestry Station	40I/9	440280

BRIEF DESCRIPTION

Oak forests intermixed with conifer plantations and tree nursery fields predominate in the station and on adjoining sand plain. Of note are several small areas of dry, open, oak parkland and prairie which remain (centred at 423628, 438274, 444268 and 445279). These support rare species such as *Quercus prinoides* and the Frosted Elfin and Karner Blue butterflies. This is the sole location for the Frosted Elfin in Ontario. Further study required.

SOURCES Cruise and Catling, 1969; Lindsay, 1981, Airphoto Interpretation; Hess, 1980; Argus and White, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay October 1976			Lindsay 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK, TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Turkey Pt. Nat. Environ. Zone	40I/9	545280

BRIEF DESCRIPTION

Within the park, much of the sand plain above the Turkey Point bluff is forested with semi-open oak-pine woods. Many prairie and southern species are found in the grassy understory. Populations of *Phlox subulata*, *Tephrosia virginiana* and *Viola pedata*, rare plants known only from Norfolk in Ontario, persist. These dry, open, oak plains are remnants of a vegetation type that was once more common on the Norfolk Sand Plain. Park facilities, mown clearings and plantations are interspersed.

SOURCES Lindsay, 1979; Lindsay, 1981, Airphoto Interpretation; IBP, 1970; Harvey, et al, 1971; Argus and White, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay June 1978			Lindsay 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK, TORONTO M7A 1W3

1981

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - Shoreline Environments (Bluffs, Beaches)

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Hawk Cliff	40I/11	855235

BRIEF DESCRIPTION

Wooded tablelands back 30 to 40 m high shore bluffs along this 2 km section of the Lake Erie shoreline just east of Port Stanley. Deciduous woods (maple-beech) shrubby old fields, a small creek valley and actively eroding bluffs comprise the major habitats of this ca. 130 ha site. In the fall, this is an excellent location for viewing hawk migration. Large flocks of hawks travel southwesterly along the north shore of Lake Erie.

SOURCES Lindsay, 1981, Airphoto Interpretation; Sensitive Areas Report, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay September 1976			Lindsay 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Lakeview South	40I/10	095230

BRIEF DESCRIPTION

An 80 ha woodlot of beech, sugar maple, elm, ash and basswood which extends south to an erosional shoreline bluff. The bluff descends abruptly 30 m or more to Lake Erie. Soils are imperfectly drained, Beverley silt loam. A small stream runs through the middle out to Lake Erie. Agricultural fields surround the woodlot.

SOURCES

Lindsay, 1976, 1981, Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Iroquois Beach Provincial Park	40I/10	150210

BRIEF DESCRIPTION

Within the park, the sandy beach plain along Lake Erie can be considered of local and possibly regional significance. Lowlying wet strands vegetated with wet sedge meadows, marshes and shrub thickets are separated by drier, sandy meadows on low ridges. Plants of interest include: marsh mallow (*Hibiscus palustris*), Loesel's twayblade orchid (*Liparis loeselii*), grass-of-parnassus (*Parnassia glauca*) and spikemoss (*Selaginella apoda*).

SOURCES Lindsay and Hanna, 1980; Lindsay, 1981, Airphoto Interpretation; IBP, 1970; Macdonald and Beechey, 1970.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay October 1977			Lindsay 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

SITE DISTRICT 7-2: NORFOLK SAND PLAIN - Shoreline Environments
(Bluffs, Beaches)

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Iroquois Beach Prov. Pk. cont'd	40I/10	150210

BRIEF DESCRIPTION

This flat sandy plain was created after lake currents were altered with the construction of a pier jutting out into Lake Erie at Port Burwell over 60 years ago. Thus, the beach deposits and plant communities are all of recent origin. Iroquois Beach is one of a very few sand beaches in Elgin County and contains unusual wetland communities. Some park development (roads and parking lots) has occurred on the plain.

Also of note is the relatively large population of adder's tongue fern (*Ophioglossum vulgatum*), an uncommon fern, on the tableland above the bluff near UTM 153218.

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Plum Creek Upland Woodlots	Sarnia	40J/16	960365

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Lambton	42 ° 46 ′N	82 ° 16 ′W	ca. 600 - 625 ft.

LOCALITY 4 km south of Brigden

TOWNSHIP Moore **LOTS** **CONCESSIONS**

AREA approx. 477 **acres** approx. 220 **ha**

OWNERSHIP

ADMINISTRATION

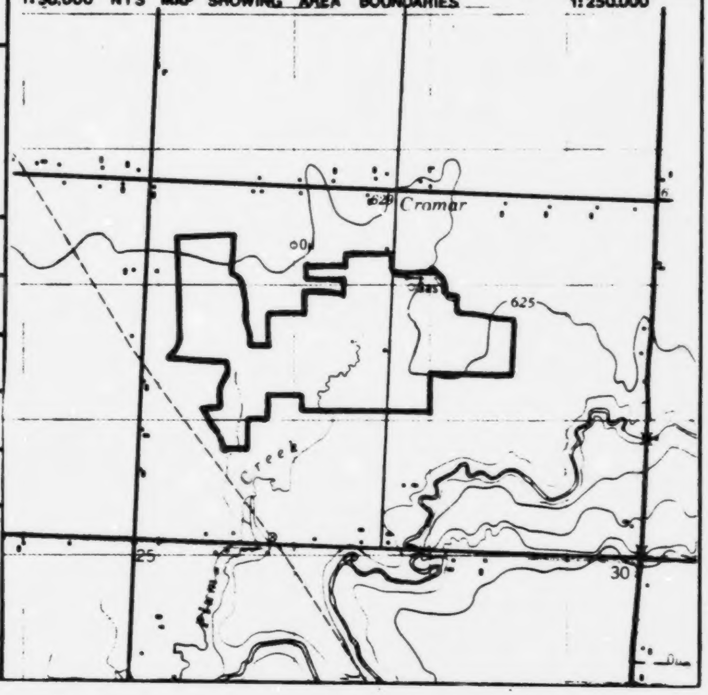
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Chatham	St. Clair C.A.

AERIAL PHOTOGRAPHS **BASE MAP:** 427822

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	250	4254	37-40

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Two large upland woodlots separated by a gravel road and a strip of cropland comprise this 210 ha site. Semi-open to closed oak-hickory woods (bur oak, white oak, swamp white oak, shagbark hickory) grow on bevelled till plain. Small amounts of silver maple swamp are present. The western woodlot serves as a headwater source for Bear Creek. The eastern woodlot houses a colony of Great Blue Herons; 25 nests were active in 1980.

This site illustrates oak-hickory forest growing on an upland, bevelled till plain site typical of the Lambton clay plain. Most of the forests remaining on the Lambton Clay Plain are small.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Lindsay, 30 September 1980, Brief field notes; 1980-81, Airphoto Interpretation; Lambton ESA, 1980.

EVALUATION AND PRIORITIES

One of the best upland forests remaining on the Lambton Clay Plain.

DATE COMPILED	COMPILER
6 June 1981	K. M. Lindsay

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3

SITE DISTRICT 7-2: ST. CLAIR CLAY PLAINS - Upland/Lowland Forests

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Sarnia Indian Reserve	40J/16	850350

BRIEF DESCRIPTION Within the City of Sarnia, the Sarnia Indian Reserve and privately-owned lands adjacent to it maintain relatively large natural areas, some of the largest left on the Lambton clay plain. Oak-hickory forest and savanna, hawthorn savanna, silver maple swamp & open meadows are the main vegetation types. Talford Creek meanders across the reserve. The continuity of the area is interrupted by the many roads, railway lines, pipelines & power lines which criss cross the area & the buildings situated along these roads. Also, some portions are agricultural land.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK, TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Clay Creek Woodland	40J/16	850365

BRIEF DESCRIPTION This large woodland of about 320 ha., situated along Clay Creek & the Coyle Drain, includes examples of maple-beech, oak-hickory, silver maple swamp & marsh communities. Although damaged by extensive grazing, cutting, & pipeline construction, this site might recover if the grazing pressure was removed.

SOURCES Lindsay, 1980-81, AirphotoInterpretation; Lambton ESA, 1979, p.20

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Plum Creek Upland Woodlots	40J/16	960365

BRIEF DESCRIPTION Two large woodlots separated by a gravel road & a strip of cropland make up this ca. 210 ha. site, located 4 km. south of Brigden. Semi-open to closed oak-hickory woods (bur oak, white oak, swamp white oak, shagbark hickory) grow on flat, bevelled till plain. Small amounts of silver maple swamp are present. The western woodlot serves as a headwater source for Bear Creek. The eastern woodlot contains a colony of Great Blue Herons; 25 nests were active in 1980. A candidate nature reserve.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Terpestra 30 Sept. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK, TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Walnut Woodlot (McRae Woods)	40I/13	260462

[illegible] DESCRIPTION

Approximately 70 ha of good quality maple-beech upland forest together with small amounts of hawthorn scrub, marsh & small ponds. 6 km. NNW of Alvinston. Disturbances to this small woodlot include selective logging & grazing. Agricultural land surrounds the woods. A Great Blue Heron colony, with 15 active nests reported in 1980, uses these woods.

SOURCES Lindsay, 1980-81,Airphoto Interpretation; Sensitive Area Report, 1977; Lambton ESA, 1980.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

SITE DISTRICT 7-2: ST. CLAIR CLAY PLAINS - River Valleys With Adjoining Uplands

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Bear Creek Floodplain & Tableland Woods	Wallaceburg	40J/9	900330

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN.	MAX.
Lambton	42 ° 45 ' N	82 ° 20 ' W	ca. 600 ft.	

LOCALITY
2.5 km northeast of Wilkesport

TOWNSHIP: Sombra
LOTS:
CONCESSIONS:

AREA
approx. 150 acres approx. 70 ha

OWNERSHIP

ADMINISTRATION

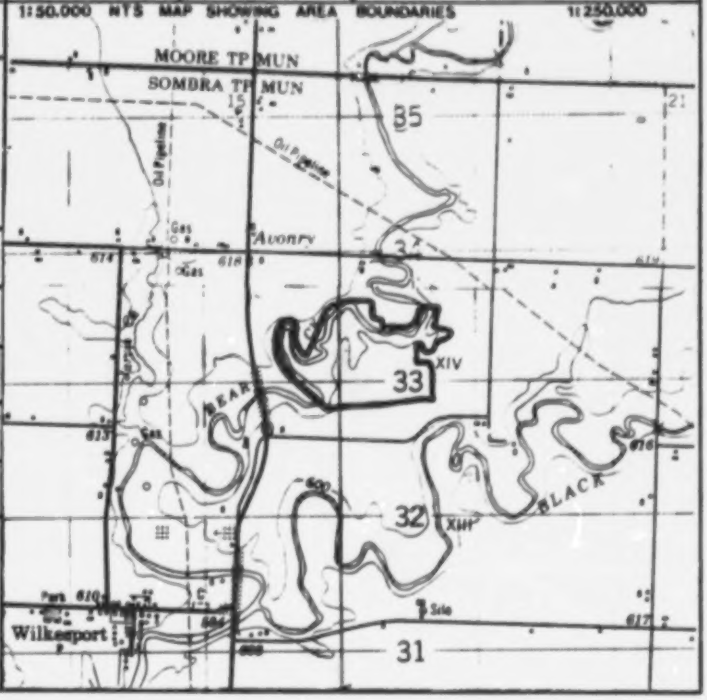
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Chatham	St. Clair C.A.

AERIAL PHOTOGRAPHS
BASE MAP: 426822

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	286	4252	42-44

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

A range of river valley habitats combined with upland forests make this small (about 70 ha) site along Bear Creek ecologically diverse. The river floodplains and terraces support black walnut, hawthorn, black maple, hickory and occasional hackberry. Riverbank thickets and trees of willow, elm, etc., line the creek. South of the river, oak slopes rise from the floodplain to an oak-hickory tableland. The condition is good despite past selective logging of the upland woods.

This small but well-preserved site was chosen to represent creek valley habitats and adjoining upland forest, because of its good condition relative to other comparable sites on the Lambton clay plain.

DATA SHEETS ATTACHED

- PHYSICAL DESCRIPTION ☐
- VEGETATION SUMMARY ☐
- EVALUATION SHEET ☐
- COMMUNITY DESCRS. ☐
- COMMUNITY COMP. LISTS ☐
- SUMMARY SPECIES LISTS ☐
- PHYSICAL FEATURES MAP ☐
- VEGETATION MAP ☐
- BIBLIOGRAPHY ☐
- PHOTOGRAPHS ☐

MAJOR INFORMATION SOURCES

Lindsay, 1 October 1980, Brief field notes;
1980-81, Airphoto Interpretation;
Lambton ESA, 1980.

EVALUATION AND PRIORITIES

Although small in size, this is one of the best river valley sites left on the Lambton Clay Plain.

DATE COMPILED	COMPILER
6 June 1981	K. M. Lindsay

SITE DISTRICT 7-2: ST. CLAIR CLAY PLAINS - River Valleys adjoining Uplands

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Bear Creek Floodplain and Tableland Woods	40J/9	900330

BRIEF DESCRIPTION A combination of river valley habitats & upland forests make this small (ca. 70 ha.) but well-preserved site along Bear Creek, 2.5 km northeast of Wilkesport interesting. Valley bottom sites support black walnut, hawthorn, black maple, hickory & occasional hackberry. Riverbank thickets & trees of willow and, elm, etc. line the creek. South of the river, oak slopes rise from the floodplain to an oak-hickory tableland. A candidate nature reserve.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Terpestra 1 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD — ONTARIO MINISTRY OF NATURAL RESOURCES, PARK PLANNING BRANCH, ENVIRONMENTAL PLANNING SECTION, 3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Black Creek	40J/16	050380

BRIEF DESCRIPTION This relatively large extent (ca. 320 ha.) of oak-hickory upland along Black Creek, southwest of Oil City exhibits a patchwork pattern of past cutting on airphotos. Small amounts of swamp forest (silver maple, swamp white oak) occur. A richer forest of maple basswood, red oak, blue beech and beech lines the narrow bottomlands along Black Creek. Much of the forest has sustained heavy selective logging in past. Black Creek dries up some summers. Several roads dissect this woodland.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Terpestra 1 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD — ONTARIO MINISTRY OF NATURAL RESOURCES, PARK PLANNING BRANCH, ENVIRONMENTAL PLANNING SECTION, 3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Bear Creek SE of Wyoming	40J/16	125520

BRIEF DESCRIPTION 110 ha. of upland woods (intermediate-aged white oak-shagbark hickory-red maple-white ash with a varied understory, and more mature beech-hickory-maple-oak woods) situated along Bear Creek, 5 km. southeast of Wyoming. Scrub woodlands, shrub thickets and agricultural lands surround the woodlot. The winding valley of Bear Creek dissects the woods. Willow-dogwood thickets and tall grass-forb meadows border the creek, which is about 2 m in width, very silty and slow-flowing.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Terpestra 30 Sept. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD — ONTARIO MINISTRY OF NATURAL RESOURCES, PARK PLANNING BRANCH, ENVIRONMENTAL PLANNING SECTION, 3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

SITE DISTRICT 7-2: EKFRID CLAY PLAIN - River Valleys with adjoining Uplands

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Thames River Floodplain	Bothwell	40I/12 Also on 40I/13	550315

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Middlesex and Elgin	42° 44' N	81° 33' W	ca. 650-700 ft.

LOCALITY about 8 km south of Melbourne; 7 km east of Tate Corners

TOWNSHIP Ekfrid/Dunwich **LOTS** **CONCESSIONS**

AREA approx. 780 **acres** approx. 360 **ha**

OWNERSHIP

ADMINISTRATION

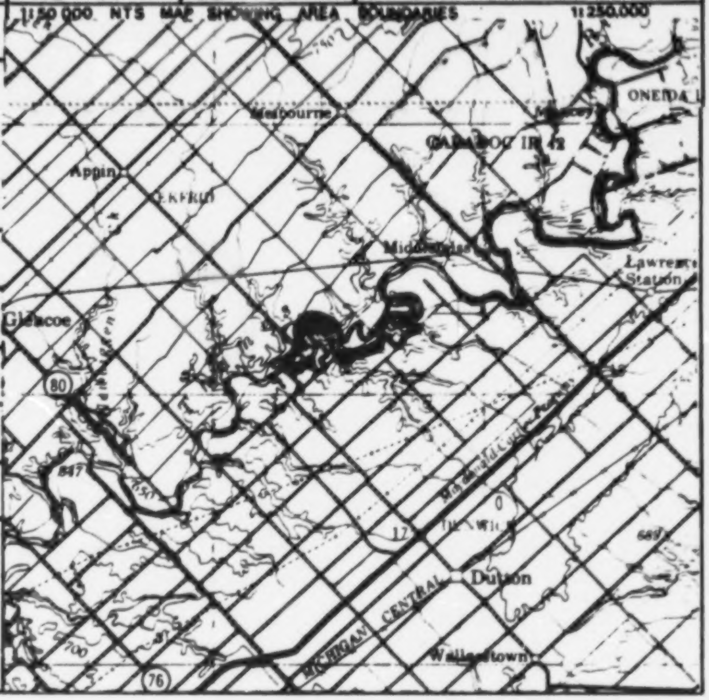
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Aylmer	Lower Thames Valley

AERIAL PHOTOGRAPHS **BASE MAP:** 426813

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	204	4252	159-165
1978	203	4251	84-88

1:50 000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Three sites in close proximity along an 8 km stretch of the Thames River illustrate a cross-section of forested river valley habitats - floodplains, floodplain terraces and valley slopes. The river corridor connects the three sites. Typically, a narrow band of hackberry - black maple - black walnut with occasional ash, basswood, manitoba maple, hickory, beech and oak, borders the riverbanks and their levees. Openings sponsor willows, and a tangle of grape vines and other shrubs and tall herbs. Stands of black walnut, black walnut - red elm - black maple; black maple - black walnut - bitternut hickory - hackberry - red elm grow on the broad floodplains that extend back from the riverbanks. Along the steep valley slopes are mixed woods of black maple, sugar maple, ash, basswood, oak, yellow birch, black cherry and beech.

This candidate nature reserve features excellent examples of mature, and very rich floodplain forests, representative of the Deciduous Forest Region (Site Region 7) but not found elsewhere in Ontario. Of note are provincially rare plants such as green dragon (*Arisaema dracontium*), hairy waterleaf (*Hydrophyllum appendiculatum*), purple joe-pye weed (*Eupatorium purpureum*), virginia bluebells (*Mertensia virginica*) and pawpaw (*Asimina triloba*). The area is reported to be one of the few nesting locations in Ontario for Red-bellied Woodpeckers. Red-bellied Woodpeckers are rare

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION ☐
VEGETATION SUMMARY ☐
EVALUATION SHEET ☐
COMMUNITY DESCRS. ☐
COMMUNITY COMP. LISTS ☐
SUMMARY SPECIES LISTS ☐
PHYSICAL FEATURES MAP ☐
VEGETATION MAP ☐
BIBLIOGRAPHY ☐
PHOTOGRAPHS ☐

MAJOR INFORMATION SOURCES

Lindsay, 3 October 1980, Brief field notes; 1980-81; Airphoto Interpretation; IBP, 1970; Lower Thames Valley ESA, 1978; James, et al, 1976; Peck, 1981, personal communication with Lindsay.

EVALUATION AND PRIORITIES

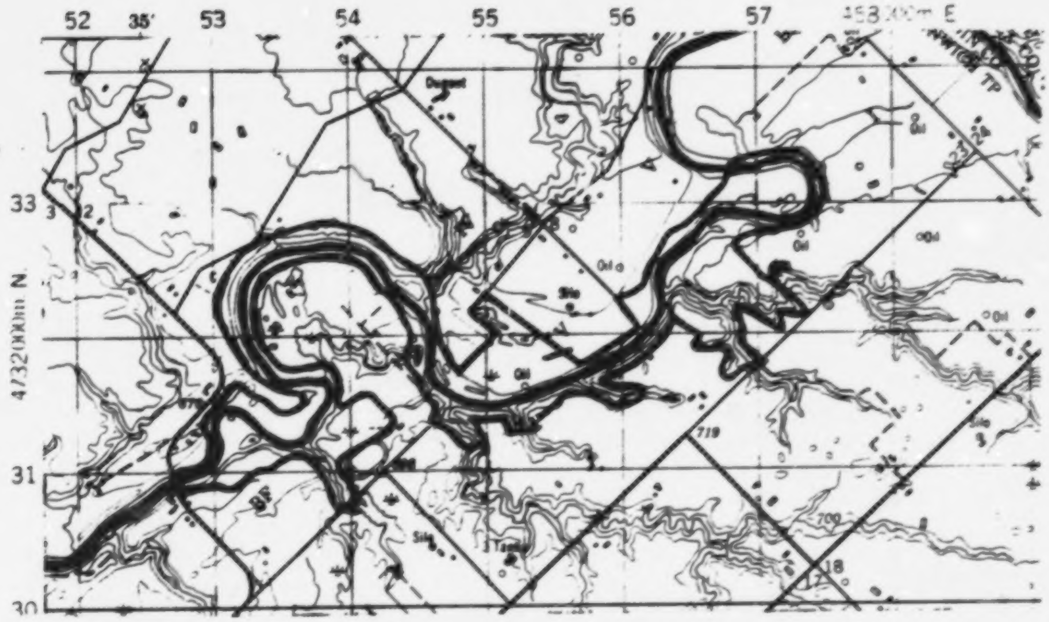
Provides excellent examples of mature, rich, floodplain forests representative of the Deciduous Forest Region (Site Region 7), but not found elsewhere in Ontario.

DATE COMPILED	COMPILER
2 June 1981	K. M. Lindsay

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario. M7A 1W3

permanent residents in the Deciduous Forest Region (James, et al, 1976). The middle section of this candidate nature reserve (centred at UTM grid reference 553317) is of lower quality because the floodplain forest is grazed heavily by cattle. However, this middle section contains several ponds and wetlands which are attractive to water birds and which add to the overall diversity.

The forested floodplains within this candidate nature reserve could be threatened. An adjacent open floodplain was recently cleared and planted to corn.



SITE DISTRICT 7-2: EKFRID CLAY PLAIN - River Valleys with adjoining Uplands

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Talbot Creek	Port Stanley	40I/11	695220

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Elgin	42° 39'N	81° 22'W	ca. 600-675 ft.

LOCALITY along Talbot Creek just north of Port Talbot on Lake Erie

TOWNSHIP	LOTS	CONCESSIONS
Dunwich		

AREA approx. 1190 acres approx. 550 ha

OWNERSHIP

ADMINISTRATION

FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

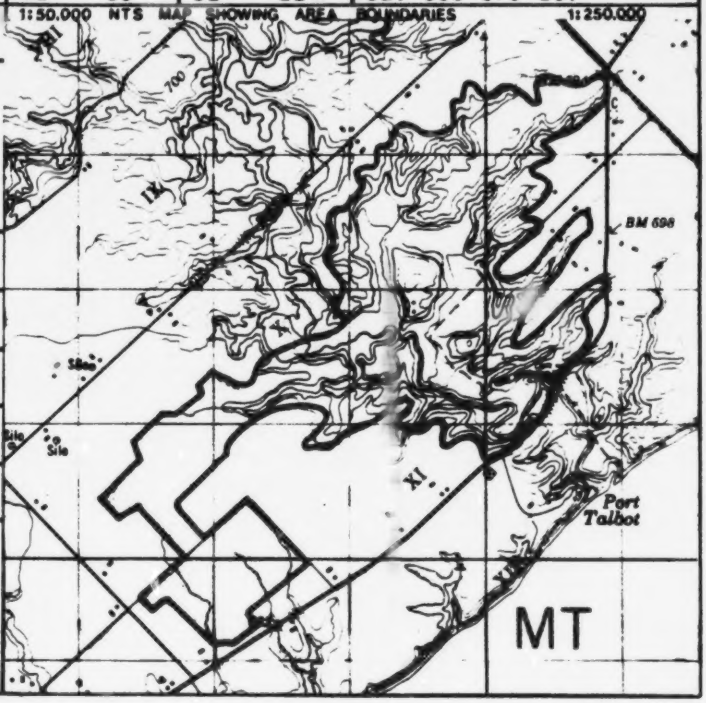
MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Aylmer	Lower Thames Valley

AERIAL PHOTOGRAPHS

BASE MAP: 426812

YEAR	ROLL	FLIGHT LINE	NUMBERS
1972	16	4228	78, 79
1972	16	4227	152-154

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

A large natural area remains along Talbot Creek in its lower reaches, near Port Talbot on Lake Erie. Talbot Creek and several small tributary streams have carved a series of steep valleys (to 40 m in depth) into the Ekfrid clay plain, resulting in a complicated topography. High quality, sugar maple forests with some beech, white ash, bitternut and shagbark hickory stand on the steep valley slopes and on some adjoining mesic to wet mesic, upland sites. Black walnut, willow and oak vegetate the floodplains. Farm fields and farm access roads are scattered throughout this large area, located wherever the complex topography permits.

Flowering dogwood (*Cornus florida*) and hairy waterleaf (*Hydrophyllum appendiculatum*) are two provincially rare plants which grow in the area. A nesting pair of Bald Eagles, one of Ontario's endangered species utilize this site. The lower Great Lakes population of Bald Eagles has declined severely over the last several decades, from an estimated population of 100 or more breeding pairs around 1950 (Weekes, 1974) to the roughly six nesting pairs which remain at present (Brownell and Oldham, 1980).

This is a well preserved, large natural area composed of representative upland forests and valley habitats. Talbot Creek has a relatively small watershed. It finds its sources on the moraine west of St. Thomas, about 14 km to the north and on the surrounding clay plain.

DATA SHEETS ATTACHED

- PHYSICAL DESCRIPTION ☐
- VEGETATION SUMMARY ☐
- EVALUATION SHEET ☐
- COMMUNITY DESCRS. ☐
- COMMUNITY COMP. LISTS ☐
- SUMMARY SPECIES LISTS ☐
- PHYSICAL FEATURES MAP ☐
- VEGETATION MAP ☐
- BIBLIOGRAPHY ☐
- PHOTOGRAPHS ☐

MAJOR INFORMATION SOURCES

Lindsay, 3 October 1980, Brief field notes; 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1976; Brownell, 1981, personal communication with Lindsay, Brownell and Oldham, 1981; Province of Ontario, 1971; Weekes, 1974.

EVALUATION AND PRIORITIES

A well-preserved river valley complex with high quality upland sugar maple forests growing on clay plain sites.

DATE COMPILED	COMPILER
3 June 1981	K. M. Lindsay

SITE DISTRICT 7-2: EKFRID CLAY PLAIN - River Valleys with adjoining Uplands

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Brown Creek Woods	40I/13	280490

BRIEF DESCRIPTION

(=Walnut Woods)Brown Creek Woods consists of 150 ha site lying along Brown Creek, a small tributary ot the Sydenham River, 1 km north of Walnut and about 6 km south of Watford. A combination of relatively mature maple-beech uplands, wooded creek floodplains (black walnut, ash, oak), hawthorn and meadow floodplains make this small area diverse. Breeding Red-bellied Woodpeckers are reported. Part of the floodplain has recently been planted to corn. Gravel pit immediately to the west. Hwy. 79, a major highway, bissects this area.

SOURCES

Sensitive Areas Report, 1978; Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Tates Bridge Floodplain	40I/12	505285

BRIEF DESCRIPTION

Along the Thames River just east of Tates Bridge is a small floodplain forest of about 50 ha in size which appears quite well preserved. The steep river valley slope opposite is also densely wooded. No field survey data was available.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Thames River Floodplain	40I/12	550315

BRIEF DESCRIPTION

Also on 40I/13. Along the Thames River about 8 km NNW of Dutton are three floodplain forests connected by the Thames River. A narrow band of hackberry-black maple-black walnut flanks the riverbanks. Stands of black walnut, black maple, red elm and bitternut hickory are well developed on the broad floodplains. Mixed woods cover some of the steep valley slopes. This candidate nature reserve features mature, rich floodplain forests typical of the Deciduous Forest Region.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; IBP, 1970; Lower Thames Valley ESA, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 3 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

SITE DISTRICT 7-2: EKFRID CLAY PLAIN - River Valleys with adjoining Uplands

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Big Munday Creek	40I/13	580355

BRIEF DESCRIPTION

Big Munday Creek, a tributary of the Thames River, has cut a narrow valley about 25 m deep into the Ekfrid Clay Plain. Its steep slopes are wooded with sugar maple, beech, ash, mixed with occasional hickories, black walnut, butternut, oaks, etc. Despite selective logging, most of the valley forests are in good condition. Some slopes have been partially cleared. A tributary stream on the east holds two ponds created by man-made dams. Size is ca. 130 ha.

SOURCES

Lindsay, 1980-81, Airphoto Interpretaion; Lower Thames Valley ESA, 1978; Sensitive Areas Report, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 3 Oct. 1980			Lindsay,1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Talbot Creek	40I/11	695220

BRIEF DESCRIPTION

A large natural area remains along Talbot Creek in its lower reaches, near Port Talbot on Lake Erie. High quality, sugar maple forests with some birch, white ash, bitternut and shagbark hickory grow on the steep valley slopes and on some adjoining mesic to wet mesic, upland sites. Black walnut, willow and oak vegetate the floodplains. Farm fields and farm access roads are scattered throughout this large (ca. 400 ha) area, located wherever the complex topography permits. A nesting pair of Bald Eagles utilizes this candidate nature reserve.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1976; Brownell and Oldham, 1981.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 3 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Iona Valleylands	40I/11	700264

BRIEF DESCRIPTION

Along the valley of Talbot Creek, just east of Iona are ca. 100 ha comprised of: deciduous upland (beech with sugar maple, bitternut hickory, black walnut, blue beech, hop hornbean), black walnut-willow floodplains, open fields and shrub-dominated areas. The woods in the eastern half are more open, with more frequent clearings amidst the forest.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay,1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Kerwood Woods	40I/13	415545

BRIEF DESCRIPTION

This maple-dominated woodlot of red maple, sugar maple and black maple with some yellow birch, slippery elm and beech, occupies a flat, imperfectly drained, silt loam site. About 120 ha in size. Just east of Kerwood and south of the railway line.

SOURCES

Sensitive Areas Report, 1978; Lindsay, 1980-81, Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Caradoc Indian Reserve	40I/14	400600

BRIEF DESCRIPTION

Also on 40I/13. The Caradoc Indian Reserve contains some of the large woodlots left on the Ekfrid Clay Plain, as well as shrub regeneration lands. The woodlands are variously disturbed by selective logging only a very general outline is given on the map, because these lands were considered outside of provincial control. A heronry is located near UTM 620430.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Lower Thames Valley ESA, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	John E. Pearce Provincial Park	40I/11	638170

BRIEF DESCRIPTION

John E. Pearce Provincial Park is divided into two parts by a concession road. Extending north of the road is a deciduous woodlot on flat, poorly-drained, clay plain composed of sugar maple, white ash, beech, bitternut hickory, white elm, basswood, yellow birch, shagbark hickory and black cherry. South of the road, a small shoreline woods set on top of a 30 m high shorebluff affords a spectacular view out over Lake Erie. Within this small woods, large beech, sugar maple, white ash, bitternut hickory and other species flank a (cont'd)

SOURCES

IBP, 1970; Lindsay, 1980-81, Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay 17 Nov.1977			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
		John E. Pearce PP cont'd	40I/11	638170

BRIEF DESCRIPTION

small gully carrying an intermittent stream. While the vegetation at John E. Pearce Provincial Park is representative, its features are considered primarily of local, and only possibly of regional, significance, because of the small size of the woods (about 40 ha).

SOURCES

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD
1981

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK, TORONTO M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Plum Point	40I/11	670180

BRIEF DESCRIPTION

At Plum Point, about 70 ha of upland and valley forest remain along a small unnamed creek which descends to Lake Erie. The small stretch of shoreline is undeveloped and the woods are relatively mature, although selectively cut. Should be examined in field.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

SITE DISTRICT 7-2: BOTHWELL SAND PLAIN - Upland/Lowland Forests

ONTARIO NATURE RESERVES PROGRAM – LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Skunk's Misery	Bothwell	40I/12	340230

COUNTY, DISTRICT or REGIONAL MUNICIPALITY
Middlesex

LAT. 42° 39'N

LONG. 81° 48'W

ALT. MIN. MAX. ca. 675 - 700 ft.

LOCALITY Between Bothwell & Wardsville, 1 km north of the Thames River

TOWNSHIP LOTS CONCESSIONS
Mosa

AREA
approx. 2670 acres approx. 1235 ha

OWNERSHIP

ADMINISTRATION

FOREST REGION AND DISTRICT
D-1

SITE REGION AND DISTRICT
7-2

MNR REGION AND DISTRICT
SW-Aylmer

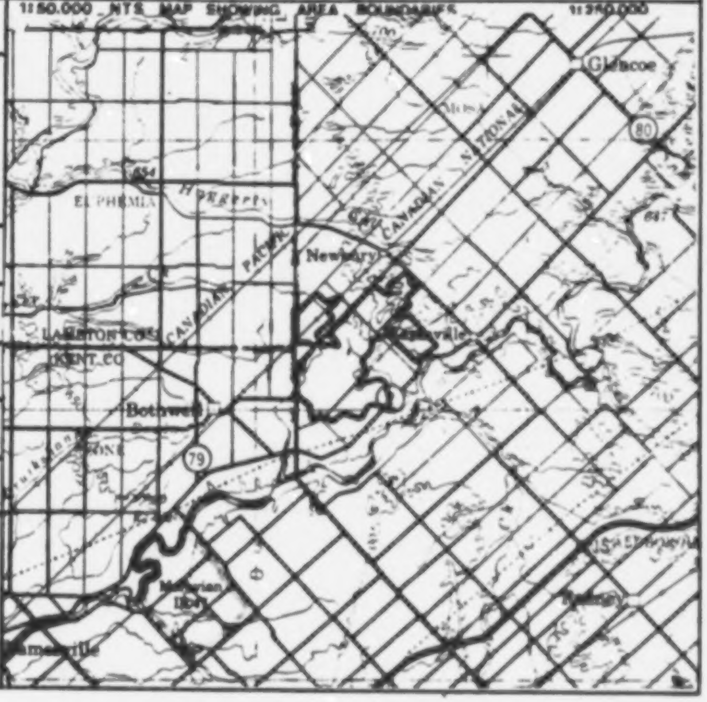
CONSERVATION AUTHORITY
Lower Thames Valley; St. Clair C.A.

AERIAL PHOTOGRAPHS

BASE MAP: 426814

YEAR	ROLL	FLIGHT LINE	NUMBERS
1972	16	4228	52-54
1972	16	4227	126-130

1:250,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Skunks Misery is an extensive tract of deciduous forest (maple, beech, oak, etc.), deciduous swamp (silver maple, ash, yellow birch, swamp white oak, etc.), interconnected woodlots and small coniferous plantations, located on the Bothwell Sand Plain. Clay underlies this flat to slightly undulating sand plain, at a depth of about 1 m, and holds the water table close to the surface. Skunks Misery possesses many lowlying stretches of spring swamp, areas which contain standing water in the spring but may dry out later in the season. Part of Skunks Misery serves as a headwater source for the Thames River whereas the northern section drains into the Sydenham River by way of Fansher Creek. Roads and trails, logging and clear cutting the forest to create agricultural land, are some of the impacts evident at this site.

Skunks Misery contains a high diversity of vegetation associations and plant and animal life. Many rare, threatened or uncommon species are reported; such as, trees and shrubs (tulip-tree, sweet chestnut, wild yam (*Dioscorea villosa*), flowering dogwood, black gum); herptiles (Butler's Garter Snake, Black Rat Snake, Eastern Hognose Snake); birds (Cerulean Warbler, Golden-winged Warbler, Brewster's Warbler); and mammals (Badger). Skunks Misery is the largest natural area left on the Bothwell Sand Plain and one of the largest upland/lowland forest complexes in this site district. Other large woodlands in the immediate vicinity have recently been

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Lindsay, September 1979, October 1980, Brief field visits; 1980-81, Airphoto Interpretation; Lower Thames Valley ESA, 1978; IBP, 1971; Small, 1978.

EVALUATION AND PRIORITIES

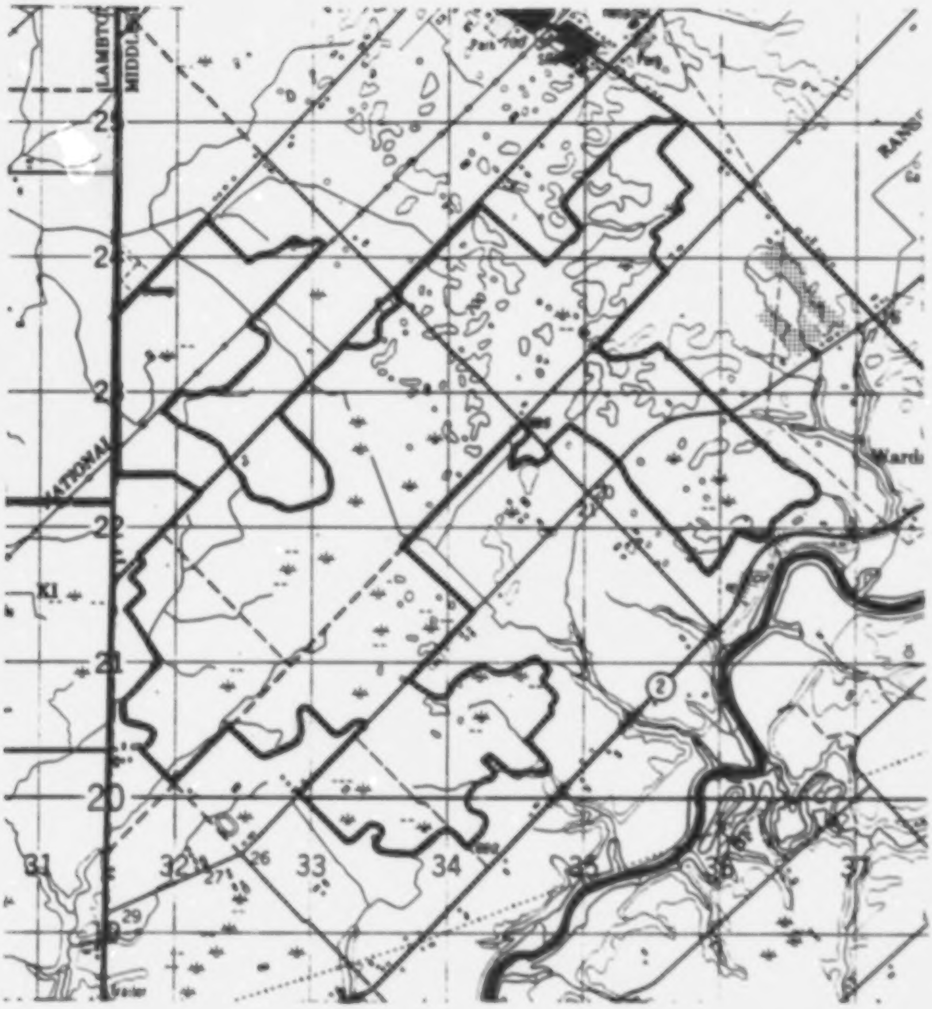
The largest tract of deciduous forest and deciduous swamp left in Site District 7-2.

DATE COMPILED
27 May 1981

COMPILER
K. M. Lindsay

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario, M7A 1W3

cleared and converted to agricultural land and parts of Skunks Misery may be similarly threatened.


LAMBTO
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SITE DISTRICT 7-2: BOTHWELL SAND PLAIN- Upland/Lowland Forests

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	West Moraviantown Woods	40I/12	255105

BRIEF DESCRIPTION

Approximately 250 ha of deciduous forest with some pastureland reverting to shrubs (hawthorn, scrub elm, sassafras, red oak); a small marsh; several small streams; and some plantation. The terrain is flat to mildly undulating and drainage is generally imperfect. This forest is quite disturbed by lumbering. Located 4 km SSW of Moraviantown, south of the Thames River.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1978; Lower Thames Valley ESA, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Moravian Indian Reserve Forestlands	40I/12	275130

BRIEF DESCRIPTION

Several large forests remain on the Moravian Indian Reserve, set back from the concession roads. Although no field data was available, these woodlands appear representative of the wetter swampy deciduous lowlands (silver maple, red maple, ash, etc.) mixed with upland deciduous forests (maple, oak, beech, etc.) that are characteristic of the Bothwell Sand Plain. In extent, they occupy about 300 ha.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	East Moraviantown Woods	40I/12	313140

BRIEF DESCRIPTION

East Moraviantown Woods consists of two large forests lying on either side of a sideroad, about 6 km south of Bothwell, south of the Thames River. Wet lowlands alternate with drier upland sites on gently rolling sandplain. The vegetation is comprised of southern deciduous forest (sugar maple, red oak, silver maple, tulip-tree; white oak, shagbark hickory, sycamore, sassafras), with young scrub aspen woods, wet meadows and fields. Parts of this ca. 250 ha area were recently cleared for agriculture. The rest of the area may be similarly threatened.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Lower Thames Valley ESA, 1978; Sensitive Areas Report, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Terpstra 2 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO M7A 1W3

SITE DISTRICT 7-2: BOTHWELL SAND PLAIN - Upland/Lowland Forests

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Skunks Misery	40I/12	340230

BRIEF DESCRIPTION

Skunks Misery is an extensive tract (about 1100 ha) of deciduous forest and swamp. Clay shallowly underlies this flat to undulating sand plain. Part of Skunks Misery serves as a headwater source for the Thames, whereas the north part drains into the Sydenham via Fansher Creek. Many rare, threatened or uncommon species are recorded - tulip-tree, flowering dogwood, black gum, Butler's Garter Snake, Black Rat Snake, Eastern Hognose Snake and Badger. This candidate nature reserve is one of the largest upland/lowland forests in Site District 7-2.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Lower Thames Valley ESA, 1978; IBP, 1971, Small, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay September, 1979			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	North Rodney Woodlots	40I/12	443170

BRIEF DESCRIPTION

Immediately north of Highway 401 and 4 km north of Rodney, are three woodlots composed of southern hardwoods intermixed with conifer plantations. Lowlands (silver maple, red maple, ash) occur in combination with drier upland sites (oak-beech-aspen; sugar maple-ash). The three woodlots are separated by gravel concession roads. The area totals about 190 ha.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1976; Lower Thames Valley ESA, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay,1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	West Lorne Tract	40I/12	485160

BRIEF DESCRIPTION

Just west of West Lorne, is about 300 ha of young deciduous swamp and upland forest, in two separate tracts. Silver maple, ash, swamp white oak swamp prediminates. Drier deciduous woods (white oak-red oak-sassafras; beech-ash-maple, beech-red maple) grow on a few well-drained knolls in the northern woodlot and prevail in the southern tract. Much of this woods has been heavily cut in the past but a few stands of more mature trees occur. Carolinian trees and shrubs are components of the forest.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; IBP, 1970; Lower Thames Valley ESA, 1978; Sensitive Areas Report, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

SITE DISTRICT 7-2: BOTHWELL SAND PLAIN - Upland/Lowland Forests

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Eagle Woodlots	40I/12	540150

BRIEF DESCRIPTION

This relatively flat sand plain site supports wet swampy woods (silver maple, willow, ash, cottonwood) with intermittent and standing pools in conjunction with deciduous forest (red maple, ash, black cherry, red oak, beech, sugar maple) on drier uplands, particularly in the southern half. Located about 2 km north of Eagle and 3 km north of the Lake Erie shoreline. Portions of this 130 ha area are logged, but the southern half is more intact.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1976; Lower Thames Valley ESA, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay,1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK, TORONTO, M7A 1W3

1981

SITE DISTRICT 7-2: BOTHWELL SAND PLAIN - Shoreline Environments, Bluffs

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Elgin and Kent County Shoreline	Ridgetown	40I/5	420000

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Elgin and Kent	42 ° 27' N	81 ° 42' W	ca. 575 - 675 ft.

LOCALITY along Lake Erie shoreline south and east of Clearville

TOWNSHIP Aldborough/Orford

LOTS

CONCESSIONS

AREA approx. 1125 acres approx. 520 ha

OWNERSHIP

ADMINISTRATION

FOREST REGION AND DISTRICT D-1

SITE REGION AND DISTRICT 7-2

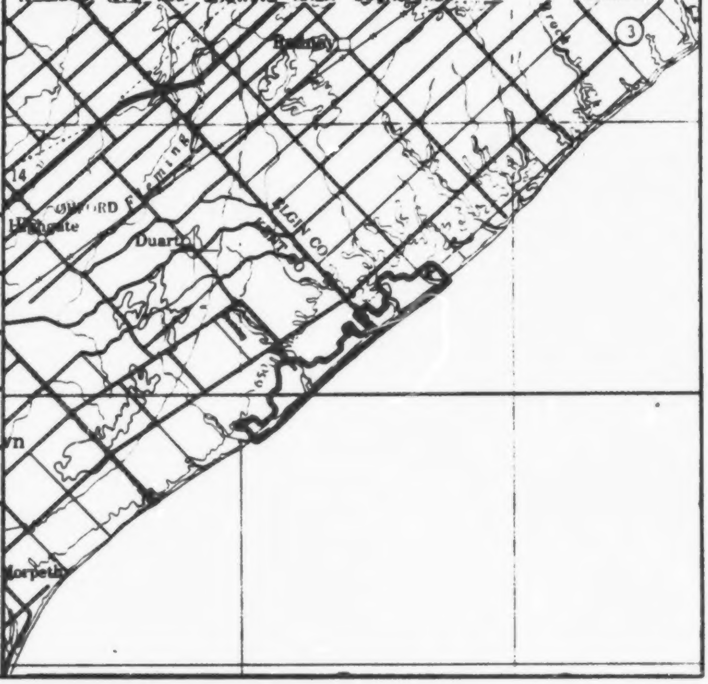
MNR REGION AND DISTRICT SW- Chatham Aylmer

CONSERVATION AUTHORITY Lower Thames Valley

AERIAL PHOTOGRAPHS BASE MAP: 424813

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	226	4234	190-192
1978	226	4233	269-272
1978	229	4232	81-84
1978	255	4231	227-229

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

South and east of Clearville, a stretch of largely undeveloped shoreline extends along Lake Erie for about 8.5 km. Several large woodlands (wet woods of ash-maple; silver maple-red maple), hawthorn savanna, shrub thickets (dogwood, sumac), old fields and smaller woodlots form a belt of natural habitat standing on the plain above a 30 m high, actively eroding shore bluff. Several fields interrupt the continuity of this belt. Five small creeks pass through the area to empty into Lake Erie.

A portion of this shoreline woods has been used by Bald Eagles as a nesting site for many years and continues to be used by a pair. The Bald Eagle is listed under Ontario's Endangered Species Act, 1971, Ontario Regulation 33/77. The lower Great Lakes population of Bald Eagles has declined severely, although up to six active nests may remain in this region. Around 1950, southern Ontario supported an estimated population of 100 or more breeding pairs, each rearing one or more young (Weekes,1974)

A trailer park situated at the eastern edge of this site threatens to reduce the size and isolation of this shoreline stretch of woodland and other natural habitats, characteristics which make this site attractive to Bald Eagles. A new road was bulldozed to the west from the trailer park into the forest in the fall of

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Lindsay, 2 October 1980, Brief field notes; 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1976; Lower Thames ESA, 1978; Brownell and Oldham, 1980; Brownell, 1981, personal communication with Lindsay; Weekes, 1974; Province of Ontario, 1971.

EVALUATION AND PRIORITIES

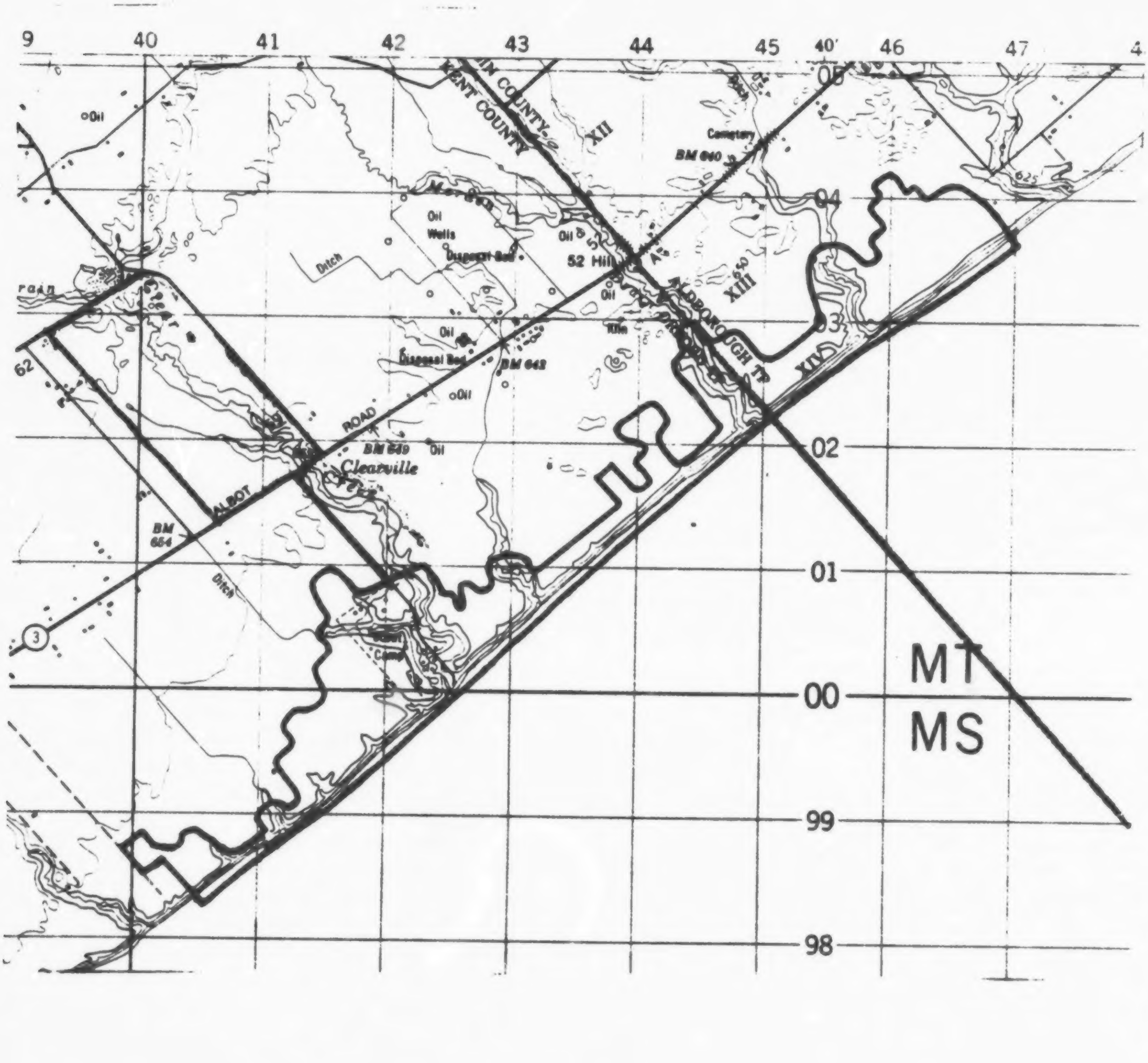
Along the north shore of Lake Erie , this is the largest extent of steep, bluff shoreline remaining in a natural habitat.

DATE COMPILED 31 May 1981

COMPILER K. M. Lindsay

1980. Additionally, a new road has been cut down to the shoreline near UTM 448022, but no development has yet ensued. A road descends to the shoreline and a Boy Scout camp at the mouth of Clear Creek.

This site was selected as a candidate nature reserve because it is the largest, most natural and most diverse example of a Lake Erie shore bluff environment and because it protects an active nesting site of the Bald Eagle, one of Ontario's endangered species. The western part of the candidate nature reserve lies in the St. Clair Clay Plains physiographic region, Site District 7-1.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ELGIN COUNTY
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Kiln
ALDBOROUGH TP
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ROAD
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BM 649
Clearville
Creek
BM 654
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Camp
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MT
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SITE DISTRICT 7-2: BOTHWELL SAND PLAIN - Shoreline Environments, Bluffs

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Elgin & Kent County Shoreline	40I/5	440015

BRIEF DESCRIPTION

South and east of Clearville, a stretch of largely undeveloped shoreline extends along Lake Erie for about 8.5 km, straddling the county line. Several large woodlands, hawthorn savanna, shrub thickets, old fields, small woodlots and cropland form a belt of natural habitat along the edge of a 30 m high, actively-eroding, shorebluff. A pair of Bald Eagles nests in this shoreline woods. A critical part of this candidate nature reserve is threatened by development.

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1976; Lower Thames Valley ESA, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 2 Oct. 1980			Lindsay, 1980

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Oakdale Woods and Floodplain	40J/9	175270

BRIEF DESCRIPTION

Five woodlots, several of which are linked by hedgerows and wooded corridors, comprise this ca. 200 ha site, lying about 4 km north of Florence. Relatively mature sugar maple-beech woods grow on some of the upland sites. Floodplain forests along the Sydenham River, meadows, and small wooded ravines are other habitats within this site. One woodlot harbours a Great Blue Heron Heronry with at least nine active nests. Portions have selectively logged, some more heavily than others.

SOURCES Lindsay, 1980-81, Airphoto Interpreation; Sensitive Areas Report, 1978; Lambton ESA, 1980.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay, Terpstra 3 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Clear Creek	40I/5	410020

BRIEF DESCRIPTION

An extensive hawthorn savanna covers most of this 3 km section along the valley of Clear Creek near Clearville, providing excellent wildlife habitat. A maple-beech woodlot bordered by a young black walnut grove stands at the northeast corner of this ca. 200 ha site. This site lies partly on clay plain and partly on sand plain. Hwy. #3 cuts across it. Clear Creek runs south through a candidate nature reserve -Elgin & Kent Co. Shoreline(40I/5 410020).

SOURCES Lindsay, 1980-81, Airphoto Interpretation; Lower Thames Valley ESA, 1978; Klinkenberg, 1981, personal communication.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 2 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR, WHITNEY BLOCK, QUEEN'S PARK, TORONTO, M7A 1W3

1981

SITE DISTRICT 7-2: BOTHWELL SAND PLAIN - Remnant Prairies

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Thamesville Moor	40J/9	173140

BRIEF DESCRIPTION

In the northwest portion of this ca. 80 ha site, two stream channels enclose about 20 ha of wet grassland and forb meadow with scattered dogwood thickets. A number of very rare prairie grasses are reported - *Andropogon virginicus, Aristida longespica, Aristida necopina* and *Panicum sphaerocarpon* - along with rare and uncommon orchids. A swamp woods (swamp white oak - red maple) occupies the southern and eastern extent of the site. Strips along the edge of this woodlot have recently been clear cut.

SOURCES Catling, et al, 1977; Lindsay, 1980-81, Airphoto Interpretation; Sensitive Areas Report, 1978.

[illegible]	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 2 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Ausable River	Parkhill	40P/4	345740

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Middlesex County	43° 07'N	81° 48'W	ca. 600 - 750 ft.

LOCALITY
northeast of Arkona

TOWNSHIP LOTS CONCESSIONS
West Williams/Bosanquet

AREA
approx. 3845 acres approx. 1780 ha

OWNERSHIP

ADMINISTRATION

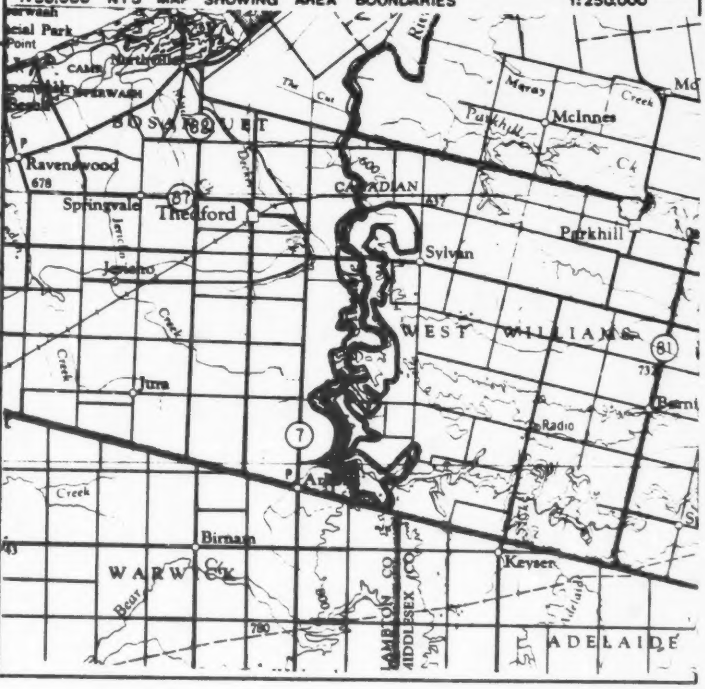
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Chatham Aylmer	Ausable-Bayfield C.A

AERIAL PHOTOGRAPHS BASE MAP: 431814/432814

YEAR	ROLL	FLIGHT LINE	NUMBERS
1972	2	4307	112-114
1972	3	4306	16-18
1972	42	4305	112, 113
1972	13	4304	21-23

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

Between Arkona and Thedford, the Ausable River has cut a steep-sided gorge and valley over 50 m deep through the Wyoming till moraine, into the underlying Devonian bedrock, and further north towards Thedford, across sand plain deposits. In the south, near Arkona, the river penetrates many metres into the highly fossiliferous limestone and shale of the Widder, Hungry Hollow and Arkona Formations. An extensive forested corridor follows the winding valley for about 15 km. The vegetation along its length includes: deciduous woods on the valley slopes and adjacent tablelands (associations of sugar maple, white ash, beech, oak, basswood, mixed with other species), hawthorn scrub and young successional woods (aspen, black walnut, ash) coniferous reforestation floodplain forests of black maple - black walnut - oak - basswood, ash - silver maple bottomlands, shrub thickets (dogwood - ninebark) and marsh, tall riverbank meadows, and prairie associations.

Because of its ruggedness and inaccessibility, this dramatic and ecologically diverse candidate nature reserve is one of the largest river valley corridors left in a natural condition in Site District 7-2. It crosses two physiographic regions, the Horseshoe Moraines and the Huron Slope, and provides representation of the features of both. Much of the forest along the valley has been lumbered. Also, the very general boundary of this site incorporates some agricultural and cleared land of

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Lindsay, 1 October, 1980, Brief field notes; 1980-81, Airphoto Interpretation; Campbell, 1977; Cook, 1977; Cordiner, 1979; Gaiser, 1966; Gregory, 1977; IBP, 1971, Ausable River Valley (south); Ausable River Valley (north); Judd, 1955, 1962: Lambton ESA, 1980; LeRay, 1928; Sensitive Area Report, 1978; Spurr & Smith, 1979.

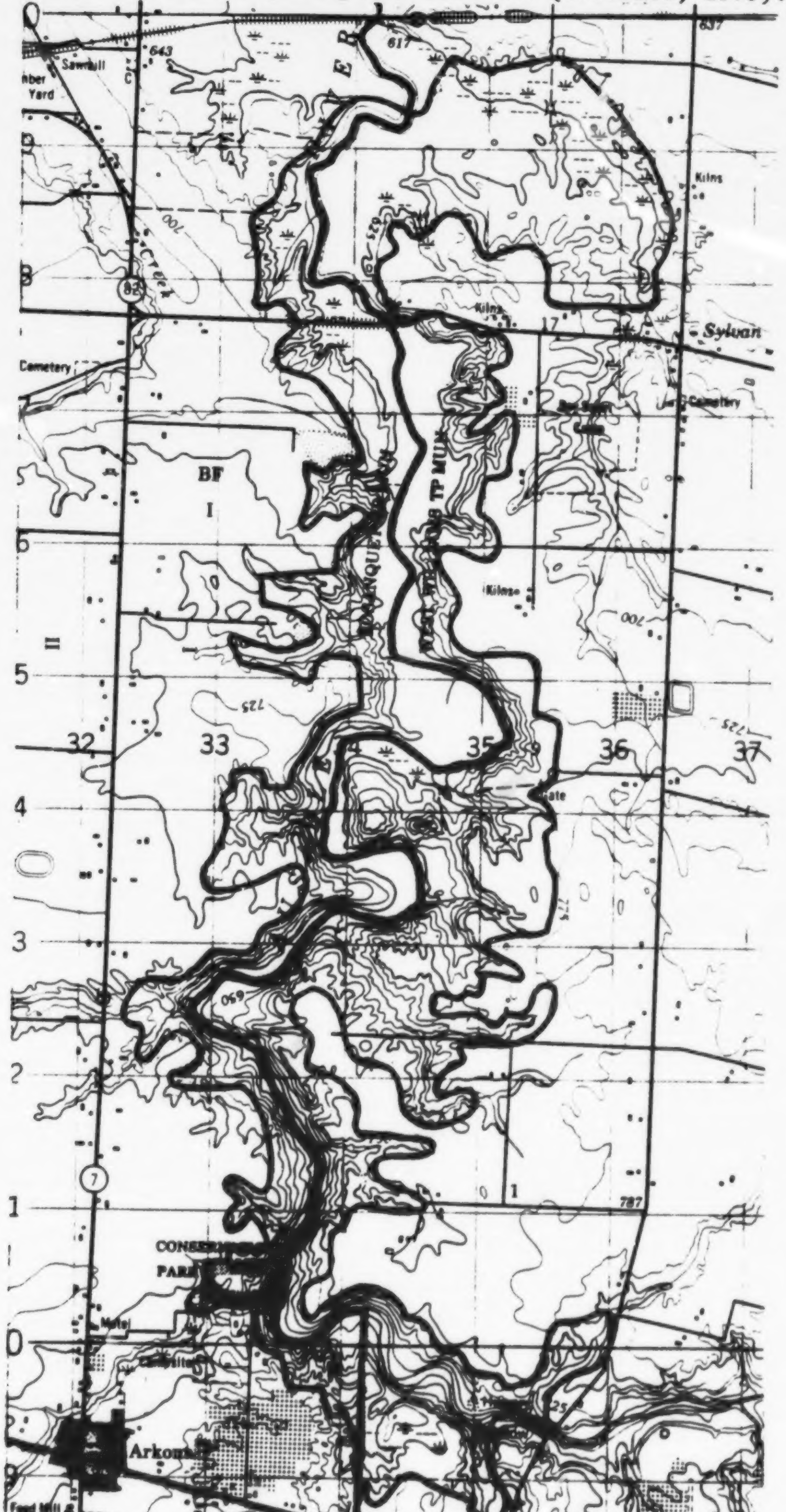
EVALUATION AND PRIORITIES

One of the largest river corridors left in a natural condition in Site Region 7, the Ausable River encompasses till moraine, sand plain and bedrock sites.

DATE COMPILED	COMPILER
5 June 1981	K. M. Lindsay

little natural value along the valley. This site protects a significant population of Queen Snakes, a species restricted in Ontario to inland southwestern Ontario at roughly a dozen localities. The Queen Snake is considered threatened in Canada, although it is not known to ever have been abundant in its Ontario range (Campbell, 1977).

At Rock Glen near Arkona, the conservation authority maintains a mill site along a picturesque waterfall and stream feeding into the Ausable River. Known internationally for its fossils, this site is considered provincially significant because of its geological features (Cordiner, 1979).



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Kilns
Sylvan
Cemetery
Cemetery
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Creek
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82
787
Motel
Campsite
Arkona
Feed Mill
Park
Fish Ponds
Airfield

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Ausable River	40P/4	345740

BRIEF DESCRIPTION

An extensive forested corridor follows the winding, steeply cut, gorge and valley of the Ausable River for about 15 km between Arkona and Thedford. This candidate nature reserve crosses two physiographic regions - the Horseshoe Moraines and the Huron Slope. The tablelands, slopes and floodplains are vegetationally diverse. A significance population of Queen Snakes inhabits the gorge.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; IBP, 1971; Lambton ESA, 1980; Spurr & Smith, 1979; Campbell, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 1 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD	ONTARIO MINISTRY OF NATURAL RESOURCES PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION 3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Ausable River near Sable	40P/4	410700

BRIEF DESCRIPTION

Forested tablelands (maple-beech-oak) and floodplains border the meandering course of the Ausable River, 8 km east of Arkona. The river and several tributary streams cut deeply into a clay till plain. Very large specimens of sycamore grow on the floodplain. Agricultural land surrounds this ca. 220 ha site.

SOURCES

Lindsay, 1981, Airphoto Interpretation; IBP, 1971; Sensitive Areas Report, 1976.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM ENVIRONMENTAL DATA CARD	ONTARIO MINISTRY OF NATURAL RESOURCES PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION 3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Oakland Swamp	40P/1	510690

BRIEF DESCRIPTION

Approximately 10 km SW of Brantford, a large swamp and lowland complex lies on a muck plain, bordered by the Paris Moraine on the west and the Galt Moraine on the east. Mixed cedar swamp with some aspen and red maple predominates. Deciduous swamp and mesic sugar maple-hemlock -beech woods also occur. A headwater area for McKenzie Creek which flows into the Grand River. About 1000 ha in size. Some clearing has taken place in north part. One concession road crosses this site.

SOURCES

Lindsay, 1976, 1981, Airphoto Interpretation; IBP, 1971; Brant County ESA, 1978.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	McGillvray Tp. Lowland Forest	40P/4	350835

BRIEF DESCRIPTION

This deciduous lowland of red maple-silver maple-ash-willow-elm-beech-hickory is one of the last large forests left on the clay and muck plain that was once occupied by Thedford Marsh. Most of Thedford Marsh has now been cleared, drained and converted to cropland. Since 1971, more than 100 ha of this approximately 280 ha forest have been levelled, including the IBP site north of Parkhill Creek at UTM 375835. Although it is grazed and logged, the rest of this forest should be protected.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; IBP, 1971; Sensitive Areas Report, 1976.

FIELD SURVEY DATE	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 2 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

SITE DISTRICT 7-2: HURON FRINGE - Sand Dune, Ridge and Swale Systems; Wetlands

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Port Franks Wetlands & Forested Dunes	Parkhill	40P/4	265855

COUNTY, DISTRICT or REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN. MAX.
Lambton	43 ° 13´N	81 ° 54´W	ca. 600 ft. - 675 ft.

LOCALITY south of Port Franks and north of Northville on Hwy. 21

TOWNSHIP Bosanquet LOTS CONCESSIONS

AREA ca. 1180 acres ca. 480 ha

OWNERSHIP

ADMINISTRATION

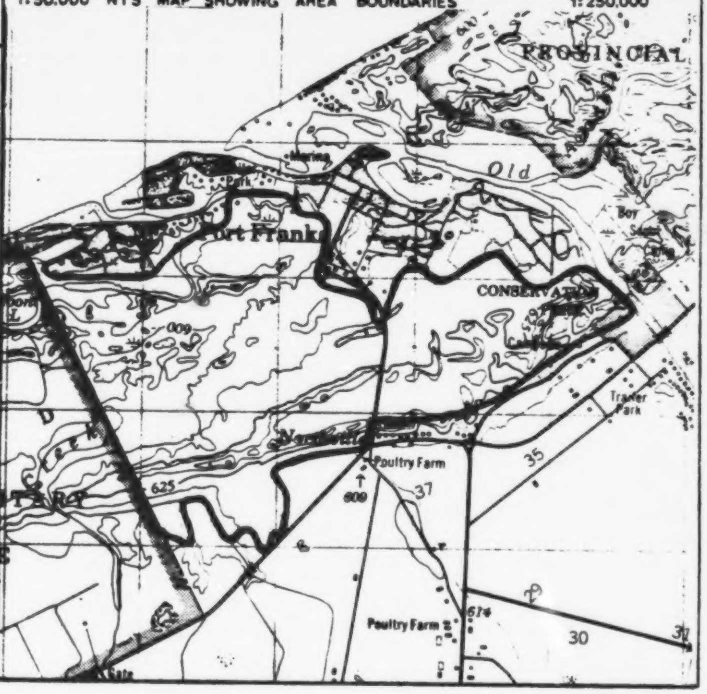
FOREST REGION AND DISTRICT	SITE REGION AND DISTRICT
D-1	7-2

MNR REGION AND DISTRICT	CONSERVATION AUTHORITY
SW-Chatham	Ausable-Bayfield

AERIAL PHOTOGRAPHS BASE MAP: 432814

YEAR	ROLL	FLIGHT LINE	NUMBERS
1978	237	4316	138-143
1978	237	4315	10-15

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000



PHYSICAL AND BIOLOGICAL FEATURES

At Port Franks, a rather broad and long lowland holding rich assemblage of wetland communities lies south of the cottage area built along the Lake Huron shoredunes. Bulrush marsh merges with cattail marsh, wet meadow, wet shrub thickets and swamp in a zone of wetlands about a shallow, linear-shaped pond and a small stream. Some bog and fen elements are reported. This wetland system extends west into the Ipperwash Military Reserve and links up with Moon and Bio Lakes. It may represent a long-abandoned channel of the Ausable River. A succession of wooded dunes (oak-pine) separated by interdunal wetlands continues south almost to Highway 21. Mud Creek traverses the lows between these ridges, exiting into the lake at Port Franks.

The varied topography and the mix of wetland and upland habitats make this large area very diverse. The wetland communities are better developed than those within Pinery Provincial Park, and northern elements are more frequent. Additionally, this area contains the only known viable population of the Karner Blue Butterfly (*Lycaeides melissa samuelis*) in Ontario (Hess, 1980). The larva of this rare butterfly depend entirely on wild lupine, a provincially rare plant, for food. The Karner Blue has been reported from two other localities in Ontario - Pinery Provincial Park south of Grand Bend and the St. Williams Forestry Station in Norfolk County - however, these populations are declining.

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980; Sensitive Areas Report, 1977; Gaiser, 1966; Hess, 1980; Klinkenberg and Crabe, 1980.

EVALUATION AND PRIORITIES

A diverse coastal dune sequence featuring a variety of wetland communities, a series of wooded dunes and rare and unusual wildlife.

DATE COMPILED	COMPILER
18 June 1980	K. M. Lindsay

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario. M7A 1W3

This entire candidate nature reserve appears to be threatened by development. A new road was recently constructed along the eastern edge of the Ipperwash Military Reserve and across the northern edge of the wetlands. Another road, the paved road between Northville and Port Franks divides the site in two.

Two other highly significant sites also represent the sand dune/beach ridge and wetland systems found southwest of Pinery, along the Lake Huron shoreline, within the Huron Fringe physiographic region: Ipperwash Beach Ridges and Swales (40P/4 215835) and the Ipperwash Military Reserve (40P/4 240845). The Ipperwash Beach Ridges and Swales, with its semi-open and forested sand ridges and a variety of interridge wetlands, ranks very closely. The Ipperwash Military Reserve was not evaluated as a candidate nature reserve because for this study, federal lands were considered to be outside provincial control. It contains a complete cross-section of sand dune and ridge habitats extending from the Lake Huron shoreline inland about 3 km, as well as significant wetlands. Although parts, particularly the sensitive shoredunes, are marked by the numerous trails created by dune buggy trespassers and possibly military exercises, these portions of the reserve might recover over time, if left alone.

SITE DISTRICT 7-2: HURON FRINGE - Sand Dune, Ridge and Swale Systems;
Wetlands

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Gustin Grove Marsh	40O/1	170800

BRIEF DESCRIPTION

Between Kettle Point (Shashawandah Creek) and Gustin Grove is a small shoreline marsh (ca. 90 ha.). Bulrush - cattail-reedgrass swards and sheltered open waters are backed by willow-dogwood thickets and wet red ash-silver maple woods. A band of shoreline woods extends south along the beach. Disturbed by several cottages on north and several access roads. This is the only example of a lakefront marsh along Lake Huron in Site Region 7.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 1 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Kettle Point Indian Reserve	40O/1 Also on 40P/4	180830

BRIEF DESCRIPTION

Most of the shoreline of the Kettle Point Indian Reserve has been developed with cottages. Inland, a marsh, pond, and other wetlands (centred at UTM 175840, 176826) and a large extent of lowland forest (about 400 ha) persists on a flat to undulating sand plain. The marsh is important to migratory and breeding waterfowl. Draining, selective cutting, and a network of roads and trails have effected the vegetation. Geologically, Kettle Point is significant for its shale outcrop which contains "kettles" or limestone concretions.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980, Sensitive Areas Report, 1977; Cordiner, 1979.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 1 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Ipperwash Beach Ridges & Swales	40P/4	215835

BRIEF DESCRIPTION

South of Ipperwash Beach, a series of low, linear sand ridges, separated by wet depressions, remains largely undeveloped. The ridges run parallel to Lake Huron. Red pine, white cedar, red cedar and white pine grow on the dry ridges creating dune parklands and woods. Mixed coniferous-deciduous forests, willow-dogwood swales and ponds with bog influences occupy the wetter sites. An area of high, wooded, dunes, broken by the meandering course of Duffus Creek lies along the east edge of this 400 ha site. A concession road divides area in two.

SOURCES

Donaldson, 1975; Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980; Sensitive Areas Report, 1977.

FIELD SURVEY (DATE)	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 1 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Ipperwash Military Reserve	40P/4	240845

BRIEF DESCRIPTION

A complete cross-section of sand dune and sand plain habitats, ranging from unforested shoredunes along Lake Huron to a large expanse of forested low dune ridges and wet swales inland, are found within the reserve. Around Bio and Moon Lakes, interdunal wetlands (wet meadows, marsh, shrub carr, swamp and some bog or fen elements) are well-developed. Significant plants are reported. Portions of the reserve especially the sensitive shoredunes, are marred by numerous trails. This site extends into the southern part of Ipperwash Provincial Park.

SOURCES

Lindsay, 1979, 1981, Airphoto Interpretation; Gaiser, 1966.

FIELD SURVEY DATE	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK TORONTO M7A 1W3

1981

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Port Franks Wetlands & Dunes	40P/4	265855

BRIEF DESCRIPTION

Just south of the cottage area at Port Franks, an interdunal lowland holds a rich assemblage of wetlands. Bulrush marsh merges with cattail marsh, wet meadow, wet shrub thickets and swamp around a shallow, linear-shaped, pond and a small stream. Bog and/or fen elements are reported. A succession of wooded dunes continues south almost to Hwy. 21. A road divides this ca. 480 ha site in two. This area appears threatened by development.

SOURCES

Lindsay, 1980-81, Airphoto Interpretation; Lambton ESA, 1980; Sensitive Areas Report, 1977; Gaiser, 1966.

FIELD SURVEY DATE	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay Terpstra 2 Oct. 1980			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK, QUEEN'S PARK TORONTO M7A 1W3

1981

ONTARIO NATURE RESERVES PROGRAM - LIFE SCIENCE INVENTORY CHECK-SHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Long Point and Turkey Point	Long Point	40I/9	580130

COUNTY, DISTRICT or REGIONAL MUNICIPALITY: Haldimand-Norfolk

LAT.: 42° 34'N

LONG.: 80° 18'W

ALT. MIN.: ca. 575 ft.

MAX.:

LOCALITY: about 25 km southwest of Port Dover along the north shore of Lake Erie

TOWNSHIP: South Walsingham

LOTS:

CONCESSIONS:

AREA: 22,200 acres 10,270 ha

OWNERSHIP: Canadian Wildlife Service; Long Point Company; Long Point Region Conservation Authority; Ontario Ministry of Natural Resources; private.

FOREST REGION AND DISTRICT: D-1

SITE REGION AND DISTRICT: 7-2

MNR REGION AND DISTRICT: SW-Simcoe

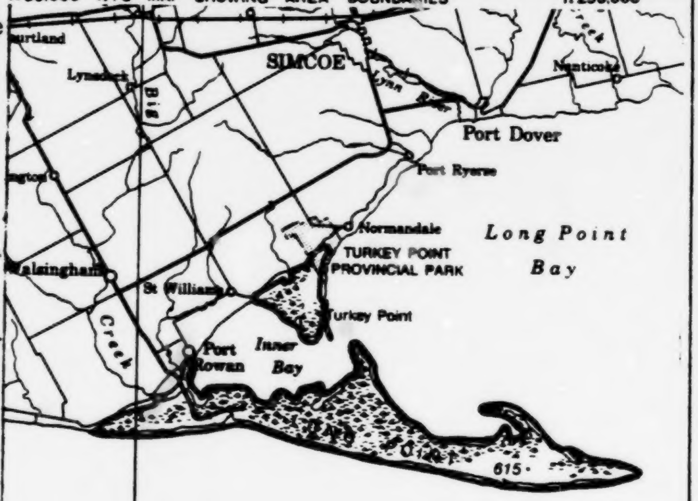
CONSERVATION AUTHORITY: Long Point C.A.

AERIAL PHOTOGRAPHS

BASE MAP: 425801/425802/425803

YEAR	ROLL	FLIGHT LINE	NUMBERS

1:50.000 NTS MAP SHOWING AREA BOUNDARIES 1:250.000



PHYSICAL AND BIOLOGICAL FEATURES

A major part of Long Point, the longest of the three major peninsulas on the north shore of Lake Erie, remains a vast and wild natural area. This sandspit, built of low sand ridges separated by extensive marshes, reaches 32 km into Lake Erie from its base at Big Creek near Port Royal. Long Point's great biological diversity derives from the variety of habitats developed along its length, combined with the minimal human disturbance over much of its expanse. Wetlands, marshes, shallow and deep water ponds, shrub carrs, and sloughs with tamarack and cedar alternate with sand environments - beaches, grassy shoredunes, dune savannas dotted with cottonwoods or junipers, rolling sandhills cloaked in grassy meadows, and woods of white pine - cedar and oak - maple parklands on the oldest ridges. The dunes increase in age westwards from the tip towards the base and inland from the south beach. The succession of plant communities found across this sequence reflects their increasing age.

Renowned for its wildlife, Long Point is a key resting and feeding area for waterfowl such as Redhead and Canvasback during migration, as well as many songbirds, shorebirds, hawks, bats and Monarch Butterflies. The herpetofauna is very rich. Significant concentrations of at least five species which have declined over their range - Spotted Turtle, Eastern Spiny Softshell, Eastern Hognose Snake, Eastern Fox Snake and Fowler's Toad - inhabit the point. Two endangered birds, the Piping Plover and the Bald Eagle, nested until recently. As well, Long Point protects over 60 species

DATA SHEETS ATTACHED

PHYSICAL DESCRIPTION	☐	SUMMARY SPECIES LISTS	☐
VEGETATION SUMMARY	☐	PHYSICAL FEATURES MAP	☐
EVALUATION SHEET	☐	VEGETATION MAP	☐
COMMUNITY DESCRS.	☐	BIBLIOGRAPHY	☐
COMMUNITY COMP. LISTS	☐	PHOTOGRAPHS	☐

MAJOR INFORMATION SOURCES

Lindsay, 1976, 1977, 1978, Brief field notes; Lindsay, 1979; 1981, Airphoto Interpretation; Seasons, Spring, 1981; Adams and Clarke, 1958; Bayly, 1979; Dennis and Chandler, 1974; Evans, 1973; Heffernan, 1978; Heffernan and Nelson, 1979; Johnston and Fearis, 1973; Klinkenberg, 1980; Miller, 1974; Snyder and Logier, 1931.

EVALUATION AND PRIORITIES

Long Point is a natural heritage area of national and international significance. The Turkey Point marsh and sandspit are part of the same Great Lakes sandspit/shoreline marsh system.

DATE COMPILED: 25 May 1981

COMPILER: K. M. Lindsay

Ontario Ministry of Natural Resources, Division of Parks, Park Planning Branch, Queen's Park, Toronto, Ontario. M7A 1W3

of rare plants, some of which grow nowhere else in Canada.

At present, the Big Creek Marsh at the base of Long Point near Port Royal (approximately 800 ha in extent), and the peninsula east of Courtright Ridge (about 3200 ha) are managed as National Wildlife Areas by the Canadian Wildlife Service. Federal regulations provide for the strict protection and conservation of the habitats and wildlife within these sites. About 3200 ha of marsh and land are still held by the Long Point Company whose far-sighted stewardship for the past 100 years preserved much of the point intact.

The Ministry of Natural Resources owns Long Point Provincial Park (an area of approximately 160 ha) and the adjacent Crown Marsh, which are situated on the narrow isthmus of the point, as well as about 60 ha of dune and wetland near the tip of Long Point. An earlier assessment (Lindsay, 1979; Lindsay and Hanna, 1980) proposed the complex of wet sedge and wildflower meadows, shrub thickets and marshes north of the main road in the provincial park (about 110 ha) as a Nature Reserve Zone. Although the area is small, these wet meadows and wetlands are older than those further east of the point, they differ in structure and composition and provide significant wildlife habitat. The Ministry property near the tip should also be managed as a Nature Reserve, or possibly handed over, with guidelines, to the Canadian Wildlife Service for protective management.

Other landowners at Long Point include the Nature Conservancy, the Long Point Region Conservation Authority and private individuals who hold cottage lots on the isthmus.

The management of Long Point should be coordinated with that for the Turkey Point Marsh and Sandspit and the rest of the Inner Bay.

Turkey Point Marsh and Sandspit

At Turkey Point, a sandspit barrier built of sediment carried by lake currents from points to the east along the shore of Lake Erie, protects a large shoreline marsh. The beach ridges and intervening wet swales lying behind the resort community of Turkey Point remain largely vegetated with woods and shrub thickets. The marsh contains cattail - reedgrass - blue joint - bulrush marsh, open water sections filled with aquatic vegetation and shrub thickets, and harbours rare plants such as yellow nelumbo (*Nelumbo lutea*). Channels and poinds have been dredged through this marsh complex. As well, part of the marsh next to the abandoned shorebluff has been diked, drained and converted to farmland.

The Turkey Point marsh and sandspit adjoins the Nature Reserve Zone proposed within Turkey Point Provincial Park (centred at 540262) by Lindsay, 1979 and Lindsay and Hanna, 1980. Here approximately 60 ha of coniferous swamp (cedar, larch, birch, black spruc), deciduous swamp (ash, silver maple, white birch), thickets and cattails are flanked by a steep, forested shorebluff. Black spruce grows at its southern limit in Ontario, along with rare plants such as the small white lady's slipper orchid (*Cypripedium candidum*[1]) and bayberry (*Myrica pensylvanica*). The special features of this wetland were recognized in 1959, when part of it was declared a Wilderness Area under Ontario's Wilderness Areas Act.

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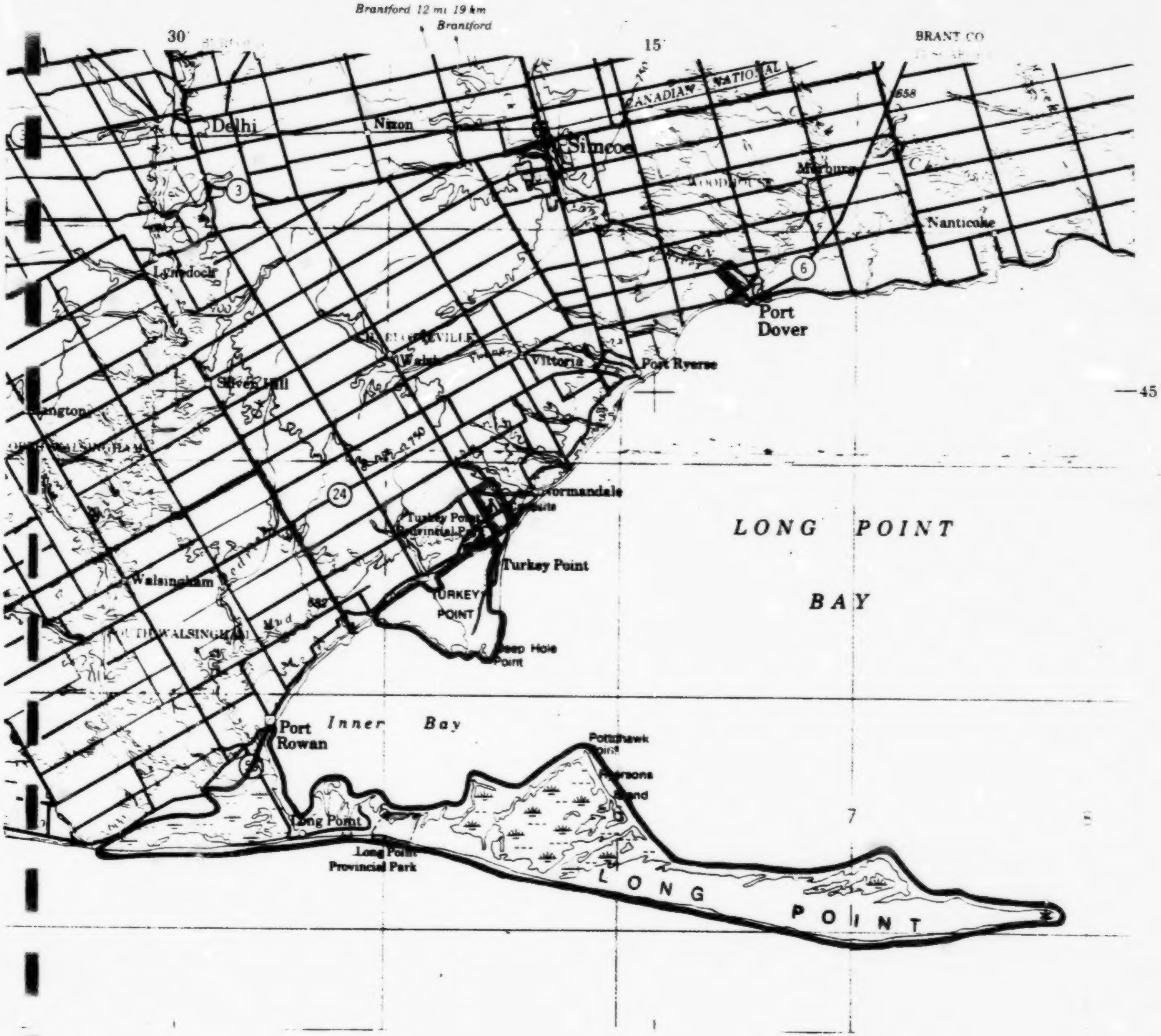
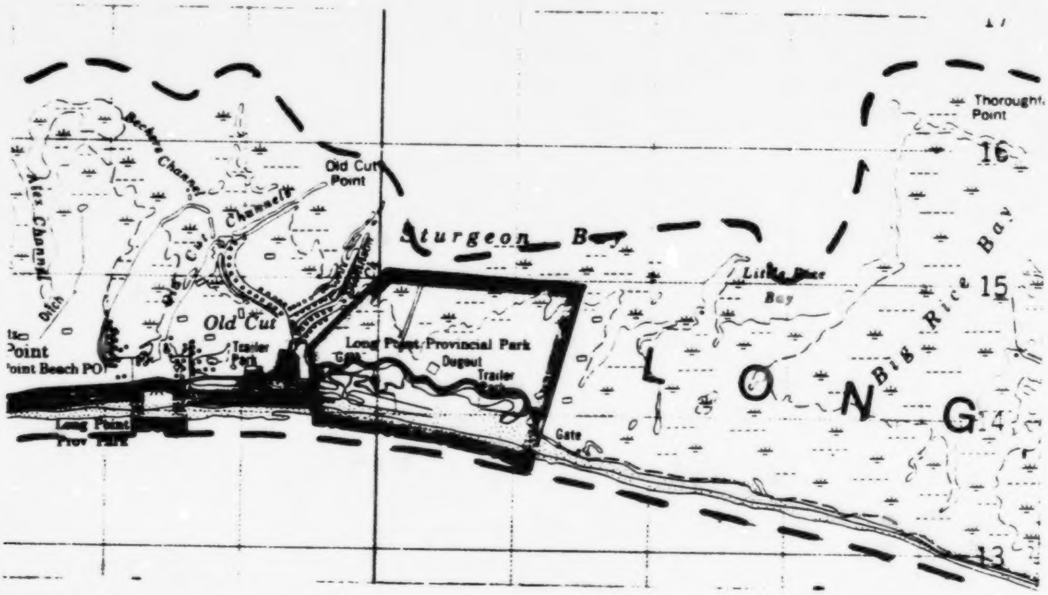
[1] Recent searches for *Cypripedium candidum* at Turkey Point have not found any plants (Klinkenberg, 1980, personal communication with Lindsay; Brownell, 1981, personal communication with Lindsay)

Long Point and Turkey Point 40I/9 580130


Brantford 12 mi 19 km
Brantford
30'
15'
BRANT CO
CANADIAN NATIONAL
Delhi
Nixon
Simcoe
Nanticoke
Lynedoch
Port Dover
Port Ryerse
Vittoria
Walsh
Silver Hill
Langton
Normandale
Turkey Point Provincial Park
Turkey Point
TURKEY POINT
Deep Hole Point
Walsingham
Port Rowan
Inner Bay
Long Point
Long Point Provincial Park
Pottahawk Point
LONG POINT BAY
LONG POINT
45
7
3
6
24

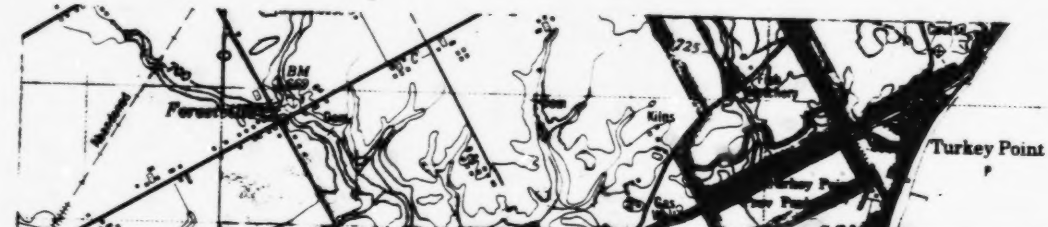
1:250,000 scale

Long Point Provincial Park: (40I/9 505145)
Proposed Nature Reserve Zone



Thoroughfare Point
16
Backus Channel
Old Cut Point
Alex Channel
Old Cut Channel
Sturgeon Bay
Little Rice Bay
Big Rice Bay
15
Old Cut
Long Point Provincial Park
Trailer Park
Dugout
Point
Point Beach PO
Long Point Prov Park
L O N G
14
Gate
13

Turkey Point Provincial Park: (40I/9 540262)
Proposed Nature Reserve Zone



Turkey Point
Kilns
Gas Well
26
Ditch
Turkey Point
TURKEY POINT
Greenhouses
Kilns
675
Ditch
Trailer Park
Marina
Marsh
23
22
NT
Deep Hole Point
21

— Proposed Nature Reserve Zone in Park

--- Remainder of Long Point and Turkey Point candidate nature reserve

SITE DISTRICT 7-2: ERIE SPITS

EARTH	LIFE	NAME OF AREA	MAP SHEET	UTM REFERENCE
	X	Long Point & Turkey Point	40I/9	660110

BRIEF DESCRIPTION

A major part of Long Point remains a vast natural area with minimal human disturbance. This sand spit built of low sand ridges separated by extensive marshes reaches 32 km into Lake Erie. North of Long Point, at Turkey Point, a sand spit barrier extending southwards shelters a large marsh and Inner Bay. This entire area is recommended as a candidate nature reserve in recognition of its national and international significance, although only parts of the total area are suggested for strict protection.

SOURCES Seasons, Spring, 1981, Special Issue on Long Point, Lindsay, 1979, 1981, Airphoto Interpretation; Bayly, 1979.

	EARTH SCIENCE CHECK SHEET	LIFE SCIENCE CHECK SHEET	DATA CARD COMPILED
Lindsay 1976,1977,1978			Lindsay, 1981

ONTARIO NATURE RESERVES PROGRAM
ENVIRONMENTAL DATA CARD

ONTARIO MINISTRY OF NATURAL RESOURCES
PARK PLANNING BRANCH ENVIRONMENTAL PLANNING SECTION
3rd FLOOR WHITNEY BLOCK QUEEN'S PARK TORONTO M7A 1W3

1981

APPENDIX B: CANDIDATE NATURE RESERVES PROPOSED BY MACDONALD (1980) FOR THE HALDIMAND CLAY PLAIN

The Haldimand Clay Plain physiographic region is located in the eastern portion of Site District 7-2, occupying the entire Niagara peninsula south of the Niagara Escarpment. Macdonald (1980)[1] divided the region into fifteen distinctive environmental subregions, each characterized by its own complement landforms, community patterns, biota, other natural features and historic land use. The following fourteen candidate nature reserves were selected to represent the natural features of eight of these environmental subregions. Figure 5 shows the location of these fourteen candidate nature reserves within the Haldimand Clay Plain. No areas of adequate size or quality were found in the remaining seven environmental subregions.

CANDIDATE NATURE RESERVE	SUMMARY OF FEATURES AND COMMENTS	SIZE (HA)
HALDIMAND SLOUGH CLAY PLAIN		
Caistor-Canborough Slough Forest (30M/4 100630)	-most extensive continuous forest in the region; several significant features; many owners; generally very disturbed; only relatively undisturbed portion recommended	35
North Cayuga Slough Forest (30L/13 940600)	-very extensive forested land; best slough basin/ridge landform in region; generally very disturbed; many owners; two portions recommended	320
Attercliffe Station Slough Forest (30L/13 115585)	-large forested land; least disturbed extensive sample of this landform-vegetation pattern	117
NIAGARA SLOUGH CLAY PLAIN		
Willoughby Clay Plain Muck Basin Forest (30L/14 550620)	-large forested land; good example of heavy clay slough landforms; one extensive submature forest under conservation authority management; see Navy Island	110
CALCAREOUS ROCK PLAIN AND ESCARPMENT		
Oriskany Sandstone and Woodlands (30L/13 860560)	-largest rockland forest in region; many significant features; only sandstone landform in site region	335

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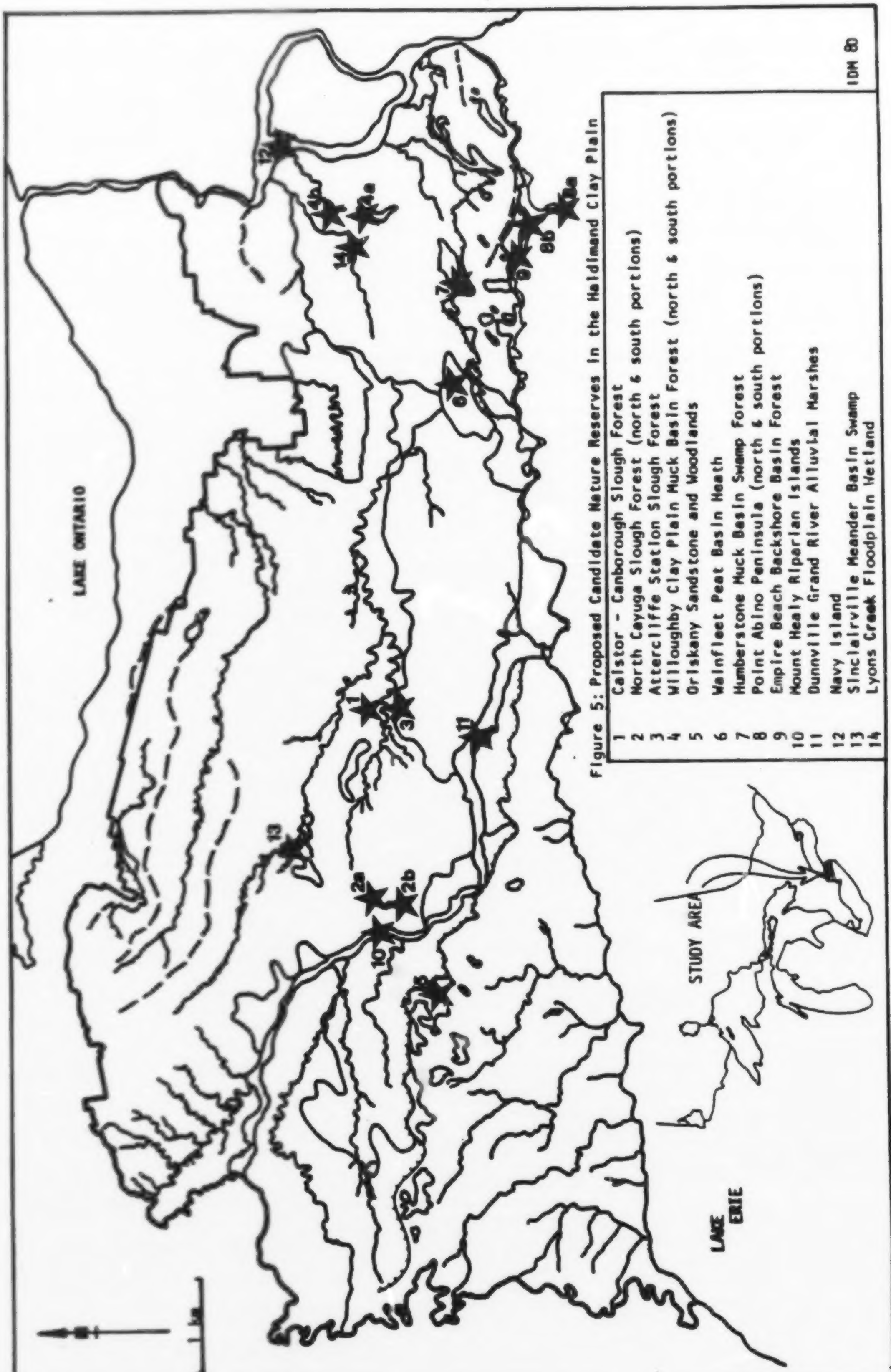
[1] For further information, please refer to:
Macdonald, I. D., 1980. Life Science Features of the Haldimand Clay Plain Physiographic Region. Ontario Ministry of Natural Resources, Parks and Recreation Section, Central Region, Richmond Hill.

FIGURE 5. CANDIDATE NATURE RESERVES PROPOSED FOR THE HALDIMAND CLAY PLAIN

CANDIDATE NATURE RESERVE	SUMMARY OF FEATURES AND COMMENTS	SIZE (HA)
ORGANIC BASIN		
Wainfleet Peat Basin Heath (30L/14 400535)	-most extensive peatland in site region; many significant features; in good condition; serious threat from extraction and drainage operations	225
Humberstone Muck Basin Swamp Forest (30L/14 490530)	-large muck basin landform and forest; several significant features; most mature forest in region; 82 ha owned by conservation authority	180
LAKE ERIE COAST		
Point Abino Peninsula Sandland Forests (30L/14 550460)	-extensive sand land and coastal features; many significant features	198
Empire Beach Backshore Basin Forest (30L/14 515485)	-large swamp forest; several significant features; complements Point Abino Peninsula features	83
LOWER GRAND RIVER VALLEY		
Mount Healy Riparian Islands (30M/3 915615)	-diverse river island features; several significant features	43
Dunnville Grand River Alluvial Marsh (30L/14 100515)	-diverse flooded river marshes; several significant features	74
NIAGARA RIVER VALLEY		
Navy Island (30M/3 615690)	-large isolated island; only extensive, undisturbed public land; may represent Niagara Slough Clay Plain features as well	137
INCISED MEANDER STREAM VALLEY		
Sinclairville Meander Basin Swamp (30M/4 990685)	-severely disturbed stream basin; excellent diversity of landforms; several significant features; long term protection warranted	80
Lyons Creek Floodplain Wetland (30L/14 505620)	-stream basin marshland; artificially flooded; diverse landforms; several significant features; adjacent to historic site; local organizations interested in protecting	73

Figure 5. Candidate Nature Reserves Proposed for the Haldimand Clay Plain


LAKE ONTARIO
LAKE ERIE
STUDY AREA
1
2a
2b
3
4a
4b
5
6
7
8a
8b
9
10
11
12
13
14
Figure 5: Proposed Candidate Nature Reserves In the Haldimand Clay Plain
1 Caistor - Canborough Slough Forest
2 North Cayuga Slough Forest (north & south portions)
3 Attercliffe Station Slough Forest
4 Willoughby Clay Plain Muck Basin Forest (north & south portions)
5 Oriskany Sandstone and Woodlands
6 Wainfleet Peat Basin Heath
7 Humberstone Muck Basin Swamp Forest
8 Point Abino Peninsula (north & south portions)
9 Empire Beach Backshore Basin Forest
10 Mount Healy Riparian Islands
11 Dunnville Grand River Alluvial Marshes
12 Navy Island
13 Sinclairville Meander Basin Swamp
14 Lyons Creek Floodplain Wetland
IDM 80

APPENDIX C: DOCUMENTED SITES OF BIOLOGICAL SIGNIFICANCE

1. SITE DISTRICT 7-2: SITES OF BIOLOGICAL SIGNIFICANCE WITH BACKGROUND INFORMATION LISTED BY 1:50,000 N.T.S. MAP SHEETS

1:50,000 N.T.S. maps included in Site District 7-2, listed from west to east, north to south.

40O/1
40J/16
40J/9
40P/5
40P/4
40I/13
40I/12
40I/5
40I/14
40I/11
40P/2
40I/15
40I/10
40P/8 - no known sites with background information
40P/1 - only sites south of N.E.P.A.[1] have been listed
40I/16
40I/9
30M/5 - no known sites with background information
30M/4 - only sites south of N.E.P.A. have been listed
30L/13 - only sites south of N.E.P.A. have been listed
30M/3 - within N.E.P.A., no sites listed
30L/14
30L/15

LEGEND TO ABBREVIATIONS

RLSS - Site identified by a regional life science study

1. Lindsay, 1976.

IBP - Site studied as part of International Biological Program.

API - Site identified by air photo analysis (Environmental Data Card).

ESA - Environmentally sensitive area identified in a report for a regional municipality, county or conservation authority

1. Brant County, ESA, 1978 and 1979.
2. Hamilton-Wentworth Region ESA, 1976.
3. Lambton County ESA, 1979.
4. Lincoln County ESA, 1979.
5. Lower Thames Valley ESA, 1978 and 1979.
6. Oxford County ESA, 1976.

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[1] N.E.P.A. = Niagara Escarpment Planning Area

SA - Ontario Ministry of Natural Resources Sensitive Areas.

INT - Ontario Ministry of Natural Resources Internal Reports.

OTHER - Other sources of information such as published articles, government reports .

400/1 BRIGHT'S GROVE	UTM GRID REFERENCES	INFORMATION SOURCE
Blackwell Railway Tracks	915636	ESA$_3$
Bright's Grove Sewage Lagoons	990640	ESA$_3$
Perch Creek	990650	SA
Camlachie Woodlot	020645	ESA$_3$
Highland Glen	093720	SA,ESA$_3$
Aberarder Creek Woodlot	095685	ESA$_3$
Hickory Creek	108735	SA
Egremont Road Woods	135635	ESA$_3$
Uttoxeter Swamp	135658	ESA$_3$
Cedar Point	139771	ESA$_3$
Shashawandah Creek/Lakeshore Marsh Complex	170805	ESA$_3$
Kettle Point Shoreline and Marsh	170830	ESA$_3$
Kettle Point	175840	SA
40J/16 SARNIA		
Stag Island	803480	ESA$_3$,OTHER
Bickford Woods	820364	SA
Sarnia Indian Reserve	850530	ESA$_3$
Burton Drain Woodlot	900450	ESA$_3$
Bear Creek Woodlot #4	902350	ESA$_3$
Bear Creek Woodlot	903350	ESA$_3$
Waubuno Woodlot #1 and 2	930380	ESA$_3$
Crown Game Reserve	945420	ESA$_3$
Plum Creek #1	960365	ESA$_3$
Bear Creek Woodlot #1	965445	ESA$_3$
Plum Creek #2	970365	ESA$_3$
Vulture Woods	970390	ESA$_3$
Mandaumin Nature Reserve	992550	IBP, SA
Black Creek #2	000360	ESA$_3$
Black Creek Woodlot	050380	ESA$_3$
Reeces Corners	080575	ESA$_3$,SA
Fox Creek Woods	090420	ESA$_3$
Little Bear Creek	090464	ESA$_3$
Bear Creek	100510	SA
40J/9 WALLACEBURG		
Rutherford Woods	070250	ESA$_3$
Huffs Corner Woods	126240	ESA$_3$
Langbank Woods	139245	ESA$_3$
Dawn-Euphemia Forest	175255	ESA$_3$
Wilkesport Woodlot #3	850295	ESA$_3$
Bear Creek Woodlot #5	852272	ESA$_3$
Bear Creek #3	900330	ESA$_3$

40P/5 GRAND BEND	UTM GRID REFERENCES	INFORMATION SOURCE
Pinery Provincial Park; Wilderness Area #2 (Shoredunes)	320905	SA,IBP
Pinery Provincial Park; Wilderness Area #1	330900	ESA_3
Pinery Provincial Park; Wilderness Area #3 (Riverside Nature Trail)	342907	SA,IBP
Pinery Provincial Park; Hickory Nature Trail	345910	SA,IBP
Pinery Provincial Park; Wilderness Area #4 (Wilderness Area)	355920	SA,IBP
Swamp Forest	420950	API
Grand Bend Airport Forest	435950	API
Khiva Conservation Woodlot	475950	SA,API,IBP

40P/4 PARKHILL		
Ravenswood	200820	SA
Ipperwash Dunes	220835	ESA_3,SA
Ipperwash Beach Ridge	230850	INT
Port Franks	250860	INT
Lake Huron Shoreline	260850	SA
Port Franks	270855	ESA_3
Pinery Provincial Park; Burley property	285872	IBP,SA
Pinery Provincial Park; Castilleja wet meadows	287878	IBP,SA
Jericho Creek Woodlot	245810	ESA_3
Pinery Provincial Park; Wilderness Area #1	300880	IBP,SA
Bear Creek Source Woodlot	305655	ESA_3
Pinery Provincial Park (#1 and 2)	310880	ESA_3
Thedford Marsh	325810	SA
Ausable Disjunct Woods	330793	ESA_3
Thedford Bog	333814	ESA_3
Ausable River Valley (South)	340700	IBP,SA,ESA_3
Ausable River Valley (North)	340750	IBP,SA,ESA_3
Arkona Ponds Area	345695	SA
Sylvan Woods	350790	SA
West Parkhill Creek Woods	370830	SA
Northeast of Arkona Woodlot	380710	SA
Thedford Marsh	380835	IBP,SA
Parkhill Mud Creek Swamp	390810	IBP
South Parkhill Creek Woods	390810	SA
Adelaide Woodlot	405630	SA
Ausable River	410685	IBP,SA
Sable Woods	410700	SA
Below Parkhill Dam	420820	SA
South of Parkhill Woodlot	450765	SA
Rookery Woodlot	460652	SA
Moray Woodlot	484820	SA
Nairn Woodlot	510750	SA

40I/13 STRATHROY

	UTM GRID REFERENCES	INFORMATION SOURCE
Highway 402 Woods	240600	ESA_3
Lake Warren Shoreline	260460	SA
McRae Woods (Walnut, Heronry Woods)	260463	ESA_3,SA
Walnut Woods (Brown Creek Woods)	280490	ESA_3,SA
Sydenham River Corridor	312347	ESA_3
Brooke Twp. Sydenham Woods	340463	ESA_3
Morrough Creek Woods	365435	SA
Dejong Woodlot	365600	SA
Kerwood Woods	420545	SA
Melbourne Marsh	500410	IBP,SA,ESA_5
Strathroy Woodlot	510580	SA
Long Woods Woodlot	540460	SA
Caradoc North Woods	570545	SA
Big Munday Creek	580355	ESA_5,SA

40I/12 BOTHWELL

	UTM GRID REFERENCES	INFORMATION SOURCE
Thamesville Sandhills	180085	SA,IBP
Selton Rolling Sandland	181073	SA,IBP
Haggerty Creek Woods (Kentucky Coffee Tree Grove)	217280	ESA_3,SA
Grape Fern Swamp	219260	ESA_3
Fansher Creek	230227	ESA_3
West Moraviantown Woods	255105	ESA_5,SA
McPhail Tract	260320	ESA_3
Highway 79 - Euphemia Woodlot	273265	ESA_3
McCready Woods	290320	ESA_3
Bothwell Woods	295185	SA,ESA_5
East Reserve Woods	300140	SA
Cottonwood Swamp	302262	ESA_3
Cairo Woods	302305	ESA_3
East Moraviantown Woods	310150	SA,ESA_5
County Line Woods	314310	ESA_3
Skunks Misery	340230	SA,IBP
South Rodney Woodlot	430090	SA,ESA_5
North Rodney Woodlot	440160	ESA,SA
West Lorne Woodlot	470153	IBP
Port Glasgow Woods/Field	489055	ESA_5
West Lorne Woodlot	490150	SA,ESA_5
Halfway Creek	520093	SA,ESA_5
Eagle Woodlot	540150	ESA_5,SA
West Dutton Woodlot	550200	ESA_5,SA
Thames River Floodplain	551318	SA,IBP,ESA_5

40I/5 RIDGETOWN

Clear Creek	420004	SA,ESA_5
New Glasgow Woodlot	454028	ESA_5
Bald Eagle	465035	SA

40I/14 ST. THOMAS

Big Munday Creek	590350	ESA_5
Caradoc Heronry	620430	ESA_5
Delaware Woodlot	660500	ESA_5,SA
Baird Creek Woodlot	670370	ESA_5,SA
Southwold Station Woodlot	710430	SA
St. Clair Junction Woodlot	780360	SA
Kettle Creek Woods	860405	SA

40I/11 PORT STANLEY	UTM GRID REFERENCES	INFORMATION SOURCE
John E. Pearce Provincial Park	635175	IBP
Iona Woodlot	690260	ESA$_5$
Port Talbot Woods	700220	ESA$_5$,SA
Hawk Cliff	854237	SA
Hawk Cliff	860232	RLSS
Jolley Swamp	865295	IBP,SA,RLSS
Dexter Woodlot	885260	SA
Barnums Gully Woodlot	930230	SA
Catfish Creek Slope and Floodplain	960290	RLSS,IBP,SA
Catfish Creek Slope and Floodplain	977250	RLSS
Catfish Creek Slope and Floodplain	980260	RLSS
Springwater Forest	980320	IBP,RLSS,SA
Tributary to Catfish Creek	985245	RLSS

40P/2 WOODSTOCK	UTM GRID REFERENCES	INFORMATION SOURCE
Brant Tract	395675	ESA$_1$
Hatchley Swamp	400630	ESA$_1$

40I/15 TILLSONBURG		
Aylmer Woodlot	060360	SA
South Creek	100340	RLSS
Little Jerry Creek Woods	130350	SA,RLSS
Isolated floodplains, Big Otter Creek	160360	RLSS
Big Otter Creek	180390	RLSS
Big Otter Creek	195405	RLSS
Eden Woods	200395	IBP,RLSS
Big Otter Creek	210420	RLSS,SA,ESA$_6$
Little Otter Creek Valley Forest	230380	IBP,SA
Otter Creek Conservation Authority Forest (Long Point Region C.A. Forest)	250500	ESA$_6$,SA,RLSS
Mabee Woods	243378	IBP,SA,RLSS
Rock Mills Area	295488	ESA$_6$
Courtland South Swamp	300400	RLSS
South Line County	314460	ESA$_6$
Spittler/Otter Creek	320513	ESA$_6$
Wyecombe Northwest Swamp	340380	RLSS
Langton Woods	350340	IBP,SA,RLSS
Milldale Area	353557	ESA$_6$
Sommerville Bush	360518	ESA$_6$
Delhi West Pine Forest	365455	IBP,SA,RLSS
Quance Bush	390440	SA
Lynedoch Big Creek Valley	400400	RLSS
Hatchley Swamp	405605	ESA$_1$

40I/10 PORT BURWELL		
Silver Creek Drainage	030263	SA
Silver Creek Valley	040245	RLSS
Mount Salem Woodlot	065295	SA
Lakeview South	093230	RLSS
Big Otter Drainage Area	110320	SA
Iroquois Beach Provincial Park	145215	IBP,RLSS,SA,INT
Vienna Woods	154240	SA
Vienna Papaw Stand	165255	IBP,SA
Straffordville Woodlot	210320	SA
Kinglake Woodlot	220260	SA
Fairgrounds West	250220	RLSS
Otter Creek Confluence	255250	RLSS

40I/10 PORT BURWELL cont'd	UTM GRID REFERENCES	INFORMATION SOURCE
Houghton Sandhills	295150	SA,RLSS
Cultus Northwest Sandplain	310220	RLSS
Wilson Tract	345215	RLSS
Venison Creek	345233	RLSS
South Walsingham Sand Ridges	360210	SA,IBP,RLSS
Big Creek Floodplain	380215	RLSS
Hahn Marsh	385135	RLSS

40P/1 BRANTFORD		
Hatchley Swamp	410630	ESA$_1$
Big Creek	440640	ESA$_1$
Burford Swamp	440700	ESA$_1$
Whiteman's Creek	445725	ESA$_1$

40P/1 BRANTFORD	UTM GRID REFERENCES	INFORMATION SOURCE
Schofield Woods	450740	ESA$_1$
Fairfield Plain	475655	ESA$_1$
Whiteman's Creek	505756	ESA$_1$
Oakland Swamp (Maple Grove Swamp)	510690	IBP,ESA$_1$
Grand South River	526787	ESA$_1$
Vivian and Smith Mill Pond and Forest	540633	ESA$_1$
D'Aubigny Forest	555721	ESA$_1$
East Oakland Forest	565670	ESA$_1$
St. George Forest	615876	ESA$_1$
Oxbow Forest	618736	ESA$_1$
Blue Creek Forest	628836	ESA$_1$
North Langford Forest	700808	ESA$_1$
Langford Forest	713814	ESA$_1$
Southwest Summit Wetland	760850	ESA$_1$
Lost Mile Woods	765775	ESA$_1$
Green Road Woods	798735	ESA$_1$

40I/16 SIMCOE		
Walsh Woodlot #1	450355	RLSS
Kelvin Swamp	450600	RLSS
Bert Arthur's Mixed Hardwoods	455590	SA,IBP,RLSS
Walsh Woodlot #2	470340	RLSS
Vanessa Swamp	480580	RLSS
Teeterville Sand Ridges	488550	SA,RLSS,IBP
Windham Centre Swampland	498535	SA,IBP,RLSS
Walsh Woodlot #3	500370	RLSS
Vanessa Southeast Swamp	510570	RLSS
Munroe Landon's Woodlot	520370	IBP,SA,RLSS
Walsh Woodlot #4	530390	RLSS
Lower Young Creek Valley	585345	RLSS
Lynn Valley Cedar Swamp	590400	SA
Marburg Station Swamp	690430	IBP,RLSS,SA
Springvale Cedar Swamp	720575	IBP,RLSS
Nanticoke Creek Marsh	758389	IBP,RLSS
Hagersville	800600	RLSS

40I/9 LONG POINT	UTM GRID REFERENCES	INFORMATION SOURCE
Backus Woods	420230	IBP,SA,RLSS
Chestnut Oak Parkland	420270	SA,RLSS
St. Williams Forestry Station	440280	RLSS
Charlotteville Sandland	468320	SA,RLSS,IBP
Walsh Rolling Sandland	473324	RLSS,SA,IBP
Long Point Marsh Dunes	480140	SA
Long Point Provincial Park Marshes	480150	SA
Long Point Provincial Park	505145	RLSS
Turkey Point Marsh	530240	SA
Turkey Point	530290	OTHER
Turkey Point Swamp	540260	RLSS
Turkey Point Provincial Park (Oak Parkland)	540275	IBP,SA,RLSS
Turkey Point - Black Spruce Cedar Swamp	545260	SA,IBP
Spooky Hills Woodland	550300	IBP,SA,RLSS
Spooky Hollow	555305	IBP,SA,RLSS
Fischer Conservation Area	570305	RLSS
Long Point	700100	RLSS

30M/4 GRIMSBY	UTM GRID REFERENCES	INFORMATION SOURCE
Oneida Woodlot	880645	IBP,SA
Tyneside Woodlot	900738	ESA$_2$
Sinclairville Lowland Forest	992688	ESA$_2$
Inverary Woods	050700	ESA$_4$
Moores Creek	085690	ESA$_4$
Ruigrok Tract	090630	ESA$_4$
McCready's Bush	110663	ESA$_4$
Vaughan Forest	160650	ESA$_4$

30L/13 DUNNVILLE		
Oriskany Sandstone and Woodlots	858554	INT,OTHER
Stoney Creek Fossil Beds	875430	SA
Ruigrok Tract	132615	ESA$_4$
Rock Point Provincial Park	180450	INT
Mohawk Island	207432	SA

30L/14 WELLAND		
Marshville Station Clay Plain	315585	IBP
Wainfleet Marsh and Peat Bog	390540	IBP
Chambers Corners Clay Plain	400560	IBP
Lyons Creek Claylands	510620	IBP
Dr. Grimarcy's Property	545465	IBP
Point Abino Sand Hills	555445	IBP

30L/15 FORT ERIE		
Windmill Point Station Clay Plain	635495	API
Miller Creek (Park)	649573 649577	IBP,SA
Niagara Junction Forest	665545	API
Crescent Beach Tulip Tree	671492	SA
Erie Beach	685497	IBP,SA

APPENDIX C: DOCUMENTED SITES OF BIOLOGICAL SIGNIFICANCE

2. SITE DISTRICT 7-2: SITES OF BIOLOGICAL SIGNIFICANCE LISTED BY PHYSIOGRAPHIC REGION (Chapman and Putnam, 1973)

Physiographic Regions within 7-2:

- Haldimand Clay Plain
- Norfolk Sand Plain
- St. Clair Clay Plains
- Ekfrid Clay Plain
- Bothwell Sand Plain
- Horseshoe Moraines
- Huron Slope
- Huron Fringe
- Erie Spits
- Caradoc Sand Plain
- Mount Elgin Ridges

HALDIMAND CLAY PLAIN

40P/1 BRANTFORD	UTM GRID REFERENCES	INFORMATION SOURCE
Lost Mile Woods	765775	ESA$_1$
Green Road Woods	798735	ESA$_1$
40I/16 SIMCOE		
Black Creek Fossil Beds	677410	SA
Marburg Station Swamp	690430	IBP,RLSS,SA
Springvale Cedar Camp	720575	IBP,RLSS
Nanticoke Creek Marsh	758389	IBP,RLSS
Hagersville	900600	RLSS
30M/4 GRIMSBY		
Oneida Woodlot	880645	IBP,SA
Tyneside Woodlot	900738	ESA$_2$
Sinclairville Lowland Forest	992688	ESA$_2$
Inverary Woods	050700	ESA$_4$
Moores Creek	085690	ESA$_4$
Ruigrok Tract	090630	ESA$_4$
McCready's Bush	110663	ESA$_4$
Vaughan Forest	160650	ESA$_4$
30L/13 DUNNVILLE		
Oriskany Sandstone and Woodlots	858554	INT,OTHER
Stoney Creek Fossil Beds	875430	SA
Ruigrok Tract	132615	ESA$_4$
Rock Point Provincial Park	180450	INT
Mohawk Island	207432	SA
30L/14 WELLAND		
Marshville Station Clay Plain	315585	IBP
Wainfleet Marsh and Peat Bog	390540	IBP
Chambers Corners Clay Plain	400560	IBP
Lyons Creek Claylands	510620	IBP
Dr. Grimarcy's Property	545465	IBP
Point Abino Sand Hills	555445	IBP

30L/15 FORT ERIE	UTM GRID REFERENCES	INFORMATION SOURCE
Windmill Point Station Clay Plain	635495	API
Miller Creek (Park)	649573 649577	IBP,SA
Niagara Junction Forest	665545	API
Crescent Beach Tulip Tree	671492	SA
Erie Beach	685497	IBP,SA

NORFOLK SAND PLAINS

40I/11 PORT STANLEY		
Hawk Cliff	854237 860232	SA,RLSS
Jolley Swamp	865295	IBP,SA,RLSS
Dexter Woodlot	885260	SA
Barnums Gully Woodlot	930230	SA
Catfish Creek Slope and Floodplain	960290	RLSS,IBP,SA
Catfish Creek Slope and Floodplain	977250	RLSS
Catfish Creek Slope and Floodplain	980260	RLSS
Springwater Forest	980320	IBP,RLSS,SA
Tributary to Catfish Creek	985245	RLSS
Port Bruce Provincial Park	990224	RLSS

40P/2 WOODSTOCK		
Brant Tract	395675	ESA$_1$
Hatchley Swamp	400630	ESA$_1$

40I/15 TILLSONBURG		
Aylmer Woodlot	060360	SA
South Creek	100340	RLSS
Little Jerry Creek Woods	130350	SA,RLSS
Isolated floodplains, Big Otter Creek	160360	RLSS
Big Otter Creek	180390	RLSS
Big Otter Creek	195405	RLSS
Eden Woods	200395	RLSS,IBP
Big Otter Creek	210420	RLSS,SA,ESA$_6$
Little Otter Creek Valley Forest	230380	IBP,SA
Mabee Woods	243378	IBP,SA,RLSS
Otter Creek Conservation Authority Forest (Long Point Region C.A. Forest)	250500	IBP,ESA$_6$, SA,RLSS
Rock Mills Area	295488	ESA$_6$
Courtland South Swamp	300400	RLSS
South Line County	314460	ESA$_6$
Spittler/Otter Creek	320513	ESA$_6$
Wyecombe Northwest Swamp	340380	RLSS
Langton Woods	350340	IBP,SA,RLSS
Milldale Area	353557	ESA$_6$
Delhi West Pine Forest	365455	IBP,SA,RLSS
Quance Bush	390440	SA
Lynedoch Big Creek Valley	400400	RLSS
Hatchley Swamp	405605	ESA$_1$

40I/10 PORT BURWELL	UTM GRID REFERENCES	INFORMATION SOURCE
Silver Creek Valley	040245	RLSS
Mount Salem Woodlot	065295	SA
Lakeview South	093230	RLSS
Big Otter Drainage Area	110320	SA
Iroquois Beach Provincial Park	145215	IBP,RLSS,SA,INT
Vienna Woods	154240	SA
Vienna Papaw Stand	165255	IBP,SA
Straffordville Woodlot	210320	SA
Kinglake Woodlot	220260	SA
Fairgrounds West	250220	RLSS
Otter Creek Confluence	255250	RLSS
Houghton Sandhills	295150	SA,RLSS
Cultus Northwest Sandplain	310220	RLSS
Wilson Tract	345215	RLSS
Venison Creek	345233	RLSS
South Walsingham Sand Ridges	360210	SA,IBP,RLSS
Big Creek Floodplain	380215	RLSS
Hahn Marsh	385135	RLSS
40P/1 BRANTFORD		
Hatchley Swamp	410630	ESA$_1$
Big Creek	440640	ESA$_1$
Whiteman's Creek	505756	ESA$_1$
Fairfield Plain	475655	ESA$_1$
East Oakland Forest	565670	ESA$_1$
St. George Forest	615876	ESA$_1$
Oxbow Forest	618736	ESA$_1$
Blue Creek Forest	628836	ESA$_1$
North Langford Forest	700808	ESA$_1$
Langford Forest	713814	ESA$_1$
Southwest Summit Wetland	760850	ESA$_1$
40I/16 SIMCOE		
Walsh Woodlot #1	450355	RLSS
Kelvin Swamp	450600	RLSS
Bert Arthur's Mixed Hardwoods	455590	SA,IBP,RLSS
Walsh Woodlot #2	470340	RLSS
Green's Corner Woodlot	470380	RLSS
Vanessa Swamp	480580	RLSS
Teeterville Sand Ridges	488550	SA,RLSS,IBP
Walsh Woodlot #3	500370	RLSS
Vanessa Southeast Swamp	510580	RLSS
Munroe Landon's Woodlot	520370	IBP,SA,RLSS
Walsh Woodlot #4	530390	RLSS
Lower Young Creek Valley	585345	RLSS
Lynn Valley Cedar Swamp	590400	SA
40I/9 LONG POINT		
Backus Woods	420230	IBP,SA,RLSS
Chestnut Oak Parkland	420270	SA,RLSS
St. Williams Forestry Station	440280	RLSS
Charlotteville Sandland	468320	SA,RLSS,IBP
Walsh Rolling Sandland	473324	RLSS,SA,IBP
Turkey Point	530290	OTHER
Turkey Point Provincial Park (Oak Parkland)	540275	IBP,SA,RLSS

40I/9 LONG POINT	UTM GRID REFERENCES	INFORMATION SOURCE
Spooky Hills Woodland	550300	IBP,SA,RLSS
Spooky Hollow	555305	IBP,SA,RLSS
Fischer Conservation Area	570305	RLSS

ST. CLAIR CLAY PLAINS

40O/1 BRIGHT'S GROVE		
Bright's Grove Sewage Lagoons	990640	ESA$_3$
Camlachie Woodlot	020645	ESA$_3$
Aberarder Creek Woodlot	095685	ESA$_3$
Egremont Road Woods	135635	ESA$_3$
Uttoxeter Swamp	135658	ESA$_3$

40J/16 SARNIA		
Stag Island	803480	ESA$_3$,OTHER
Bickford Woods	820364	SA
Sarnia Indian Reserve	850530	ESA$_3$
Bear Creek Woodlot #4	902350	ESA$_3$
Burton Drain Woodlot	900450	ESA$_3$
Bear Creek Woodlot #4	900350	ESA$_3$
Waubuno Woodlot	930380	ESA$_3$
Crown Game Reserve	945420	ESA$_3$
Plum Creek #1	960365	ESA$_3$
Bear Creek Woodlot #1	965445	ESA$_3$
Plum Creek #2	970365	ESA$_3$
Vulture Woods	970390	ESA$_3$
Maudaumin Nature Reserve	992550	IBP,SA
Black Creek #2	000360	ESA$_3$
Black Creek Woodlot	050380	ESA$_3$
Reeces Corners	080575	SA,ESA$_3$
Fox Creek Woods	090420	ESA$_3$
Little Bear Creek	090470	ESA$_3$
Bear Creek	100510	SA

40J/9 WALLACEBURG		
Wilkesport Woodlot #3	850295	ESA$_3$
Bear Creek Woodlot #5	852272	ESA$_3$
Rutherford Woods	070250	ESA$_3$
Huffs Corner Woods	126240	ESA$_3$
Langbank Woods	139245	ESA$_3$

40P/4 PARKHILL		
Jericho Creek Woodlot	245810	ESA$_3$

40I/13 STRATHROY		
Highway 402 Woods	240600	ESA$_3$
Lake Warren Shoreline	260460	SA
McRae Woods (Walnut, Heronry Woods)	260463	SA,ESA$_3$

EKFRID CLAY PLAIN

	UTM GRID REFERENCES	INFORMATION SOURCE
40J/13 STRATHROY		
Walnut Woods (Brown Creek Woods)	280490	SA,ESA$_3$
Sydenham River Corridor	312347	ESA$_3$
Brooke Township Sydenham Woods	340463	ESA$_3$
Morrough Creek Woods	365435	SA
Kerwood Woods	420545	SA
Melbourne Marsh	500410	IBP,SA,ESA$_5$
Big Munday Creek	580355	ESA$_5$,SA
40I/12 BOTHWELL		
Thames River Floodplain	551318	SA,IBP,ESA$_5$
40I/14 ST. THOMAS		
Big Munday Creek	590350	ESA$_5$
Caradoc Heronry	620430	ESA$_5$
Baird Creek Woodlot	670370	ESA$_5$,SA
Southwold Station Woodlot	710430	SA
40I/11 PORT STANLEY		
John E. Pearce Provincial Park	635175	IBP
Iona Woodlot	690260	ESA$_5$
Port Talbot Woods	700220	ESA$_5$,SA

BOTHWELL SAND PLAIN

40J/9 WALLACEBURG		
Oakdale Woods (Shetland Heronry)	175270	SA,ESA$_3$
Thamesville Moor	176136	ESA$_5$SA
40I/12 BOTHWELL		
Thamesville Sandhills	180085	SA,IBP
Selton Rolling Sandland	181073	SA,IBP
Haggerty Creek Woods (Kentucky Coffee Tree Grove)	217280	SA,ESA$_3$
Grape Fern Woods	219260	ESA$_3$
Fansher Creek	230227	ESA$_3$
West Moraviantown Woods	255105	ESA$_5$,SA
McPhail Tract	260320	ESA$_3$
Highway 79-Euphemia Woodlot	273265	ESA$_3$
McCready Woods	290320	ESA$_3$
Bothwell Woods	295185	SA,ESA$_5$
East Reserve Woods	300140	SA
Cottonwood Swamp	302262	ESA$_3$
Cairo Woods	302305	ESA$_3$
East Moraviantown Woods	310150	SA,ESA$_5$
County Line Woods	314310	ESA$_3$
Skunks Misery	340230	IBP,SA,ESA$_5$
South Rodney Woodlot	430090	SA,ESA$_5$
North Rodney Woodlot	440160	ESA,SA
West Lorne Woodlot	470153	IBP
Port Glasgow Woods/Field	489055	ESA$_5$
West Lorne Woodlot	470153	IBP
Port Glasgow Woods/Field	489055	ESA$_5$
West Lorne Woodlot	490150	SA,ESA$_5$,IBP
Halfway Creek	520093	SA,ESA$_5$
Eagle Woodlot	540150	ESA$_5$,SA
West Dutton Woodlot	550200	ESA$_5$,SA

40I/5 RIDGETOWN

Clear Creek	420004	SA,ESA$_5$
New Glasgow Woodlot	454028	ESA$_5$
Bald Eagle	465035	SA

HORSESHOE MORAINES

40P/4 PARKHILL

Bear Creek Source Woodlot	305655	ESA$_3$
Ausable River Valley (South)	340700	IBP,SA,ESA$_3$
Ausable River Valley (North)	340750	IBP,SA,ESA$_3$
Arkona Ponds Area	345695	SA
Northeast of Arkona Woodlot	380710	SA
Adelaide Woodlot	405630	SA
Ausable River	410685	IBP,SA
Sable Woods	410700	SA
Rookery Woodlot	460652	SA
Nairn Woodlot	510750	SA

40I/13 STRATHROY

Dejong Woodlot	365600	SA

40I/15 TILLSONBURG

Summerville Bush	360518	ESA$_6$

40P/1 BRANTFORD

Burford Swamp	440700	ESA$_1$
Schofield Woods	450740	ESA$_1$
Whiteman's Creek	505756	ESA$_1$
Oakland Swamp (Maple Grove Swamp)	510690	IBP,ESA$_1$
Grand South River	526787	ESA$_1$
Vivians and Smiths Mill Pond and Forest	540633	ESA$_1$
D'Aubigny Forest	555721	ESA$_1$

40I/16 SIMCOE

Windham Centre Swampland	495534	SA,IBP,RLSS

HURON SLOPE

40P/5 GRAND BEND

Swamp Forest	420950	API
Grand Bend Airport Forest	435950	API
Khiva Conservation Woodlot	475950	SA,API,IBP

40P/4 PARKHILL

Thedford Marsh (Thedford Bog)	325810	SA,ESA$_3$
Ausable Disjunct Woods	330793	ESA$_3$
Ausable River Valley	340755	ESA$_3$
Sylvan Woods	350790	SA
West Parkhill Creek Woods	370830	SA
Thedford Marsh	380835	IBP,SA
Parkhill Mud Creek Swamp (South Parkhill Creek Woods)	390810	IBP,SA
Below Parkhill Dam	420820	SA
South of Parkhill Woodlot	450765	SA
Moray Woodlot	484820	SA

HURON FRINGE

40O/1 BRIGHT'S GROVE	UTM GRID REFERENCES	INFORMATION SOURCE
Blackwell Railway Tracks	915636	ESA_3
Perch Creek	990650	SA
Highland Glen	093720	SA, ESA_3
Hickory Creek	108735	SA
Cedar Point	139771	ESA_3
Shashawandah Creek Woodlots and Lakeshore Marsh	170805	ESA_3
Kettle Point Shoreline and Marsh Comples	170830	ESA_3, SA

40P/5 GRAND BEND		
Pinery Provincial Park; Wilderness Area #2 (Shoredunes)	320905	SA, IBP, ESA_3
Pinery Provincial Park; Wilderness Area #3 (Riverside Nature Trail)	342907	SA, IBP, ESA_3
Pinery Provincial Park; Hickory Nature Trail	345910	SA, IBP, ESA_3
Pinery Provincial Park; Wilderness Area #4 (Wilderness Trail)	355920	SA, IBP, ESA_3

40P/4 PARKHILL		
Ravenswood	200820	SA
Ipperwash Beach Ridges	220835	ESA_3, SA, INT
Port Franks	250860	INT
Lake Huron Shoreline	260850	SA
Port Franks	270855	ESA_3
Pinery Provincial Park - Burley Property	285872	IBP, SA, ESA_3
Pinery Provincial Park - Castilleja Wet Meadows	287878	IBP, SA, ESA_3

ERIE SPITS

40I/9 LONG POINT		
Long Point Marsh and Dunes	480140	SA
Long Point Provincial Park Marshes	480150	SA
Long Point Provincial Park	505145	RLSS
Turkey Point Marsh	530240	SA
Turkey Point - Black Spruce Cedar Swamp	540260	SA, IBP, RLSS
Long Point	700100	RLSS

CARADOC SAND PLAIN

40I/13 STRATHROY		
Strathroy Woodlot	510580	SA
Longwoods Woodlot	540460	SA
Caradoc North Woods	570545	SA

40I/14 ST. THOMAS		
Delaware Woodlot	660500	ESA_5, SA

MOUNT ELGIN RIDGES

40I/14 ST. THOMAS		
St. Clair Junction Woodlot	780360	SA
Kettle Creek Woods	860405	SA

APPENDIX D: POLICY FOR AREAS OF NATURAL AND SCIENTIFIC INTEREST

Areas of Natural and Scientific Interest (ANSI) are areas of land and water containing natural landscapes or features which have been identified as having values related to protection, natural heritage appreciation, scientific study or education.

ANSI s may vary in level of significance. The most significant of these may contribute to the achievement of the Ministry's protection objective.

Where ANSI s occur on public lands managed by the Ministry, it will ensure that the land uses and activities which occur provide for the protection of identified values.

On private lands, the Ministry will, through cooperation with others, attempt to ensure that landowners are aware of significant features on their properties and seek the owners' cooperation in protecting such features. The identification of areas of natural and scientific interest on private land does not indicate an intent of the Ministry to acquire this land.

ANSI s encourage the protection of additional areas not regulated as provincial parks and provide a focus for both the public and private sectors to contribute to the protection of Ontario's natural heritage.

SOURCE: Ontario Ministry of Natural Resources, 1983. Backgrounder: Land Use Guidelines. Southwestern Region.

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Niagara	30M/3W	1965
Niagara	30M/3E	1965
Grimsby	30M/4W	1965
Grimsby	30M/4E	1965
Hamilton	30M/5W	1965
Hamilton	30M/5E	1965
Ridgetown	40I/5	1977
Long Point	40I/9	1973
Port Burwell	40I/10	1977
Port Stanley	40I/11	1977
Bothwell	40I/12	1979
Strathroy	40I/13	1977
St. Thomas	40I/14	1979
Tillsonburg	40I/15	1973
Simcoe	40I/16	1972
Wallaceburg	40J/9	1979
Sarnia	40J/16	1978
Bright's Grove	40O/1	1977
Brantford	40P/1	1976
Woodstock	40P/2	1973
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MAPS NOT

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